1: Anal Biochem. 1983 Apr 15;130(2):485-90.

A new class of nonionic detergents with a gluconamide polar group.

Hjelmeland LM, Klee WA, Osborne JC Jr.

Detergents containing either a cholic acid, a deoxycholic acid, or an octanoic acid-like hydrophobic moiety and a bisgluconamidopropyl polar group were synthesized. Extinction coefficients, partial specific volumes, critical micelle concentrations, and aggregation numbers were determined for each of the detergents. The two bile acid derivatives are capable of solubilizing functional opiate receptor, while the octanoic acid derivative is not.

PMID: 6869837 [PubMed - indexed for MEDLINE]

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Sulfobetaine derivatives of bile acids: nondenaturing surfactants for membrane biochemistry.
Anal Biochem. 1983 Apr 1;130(1):72-82.
PMID: 6869811 [PubMed - indexed for MEDLINE]

1: Anal Biochem. 1983 Apr 1;130(1):72-82.

Sulfobetaine derivatives of bile acids: nondenaturing surfactants for membrane biochemistry.

Hjelmeland LM, Nebert DW, Osborne JC Jr.

The syntheses of four new sulfobetaine derivatives of bile salts are presented, along with a general set of criteria for useful detergents in membrane biochemistry. Physical properties including the critical micelle concentration, aggregation number, partial specific volume, critical micellar temperature, uv-vis spectrum, and circular dichroism spectrum are examined for the new compounds. To examine the interaction of this class of compounds with macromolecules, one of these (CHAPS) was further studied. Circular dichroism spectra of apolipoprotein C-III2 were measured in the presence of varying concentrations of CHAPS to determine the effect of this compound on secondary structure. Gel-exclusion chromatography and sedimentation equilibrium studies of cytochrome P-450 in the presence of CHAPS were also performed to establish the ability of this detergent to disaggregate cytochrome P-450 to a monomeric/dimeric state.

PMID: 6869811 [PubMed - indexed for MEDLINE]

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Anal Biochem. 1983 Apr 15;130(2):485-90.
PMID: 6869837 [PubMed - indexed for MEDLINE]

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Sulfobetaine derivatives of bile acids: nondenaturing surfactants for membrane biochemistry.
Anal Biochem. 1983 Apr 1;130(1):72-82.
PMID: 6869811 [PubMed - indexed for MEDLINE]

1: Proc Natl Acad Sci U S A. 1980 Nov;77(11):6368-70. Related Articles, Links

A nondenaturing zwitterionic detergent for membrane biochemistry: design and synthesis.

Hjelmeland LM.

The synthesis and evaluation of a new detergent that is a zwitterionic derivative of cholic acid is presented. This detergent combines the useful properties of both the sulfobetaine-type detergents and the bile salt anions. The new detergent proved to be effective at solubilizing membrane proteins in a nondenatured state.

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1: Okah FA, Mundy DC, Ekekezie II. Related Article

Combining phenobarbital and indomethacin to improve e neonatal outcomes in the extremely low birth weight infa
Am J Perinatol. 2005 Jan;22(1):11-7.
PMID: 15668839 [PubMed - in process]

2: Chen D, Zhao M, Mundy GR. Related Article

Bone morphogenetic proteins.
Growth Factors. 2004 Dec;22(4):233-41.
PMID: 15621726 [PubMed - in process]

3: Whalen C, Schreibman L. Related Article

Joint attention training for children with autism using bel modification procedures.
J Child Psychol Psychiatry. 2003 Mar;44(3):456-68.
PMID: 12635974 [PubMed - indexed for MEDLINE]

4: McMullin JP, Mundy LG, Blake GA. Related Article

The circumstellar environment of IRAS 05338-0624.
Astrophys J. 1994 Dec 10;437(1 Pt 1):305-16.
PMID: 11539169 [PubMed - indexed for MEDLINE]

5: Helvering LM, Sharp RL, Ou X, Geiser AG. Related Article

Regulation of the promoters for the human bone morphogenetic protein 2 and 4 genes.
Gene. 2000 Oct 3;256(1-2):123-38.
PMID: 11054542 [PubMed - indexed for MEDLINE]

6: Naested H, Fennema M, Hao L, Andersen M, Janssen DB, Mundy J. Related Article

A bacterial haloalkane dehalogenase gene as a negative

selectable marker in Arabidopsis.
Plant J. 1999 Jun;18(5):571-6.
PMID: 10417708 [PubMed - indexed for MEDLINE]

☐ **7:** Vesely J, Smrcka V. Related Article

Replantation by arterialization of the venous system of amputated parts.
Acta Chir Plast. 1995;37(3):67-70.
PMID: 8991208 [PubMed - indexed for MEDLINE]

☐ **8:** Chaudhry B, Muller-Uri F, Cameron-Mills V, Gough S, Simpson D, Skriver K, Mundy J. Related Article

The barley 60 kDa jasmonate-induced protein (JIP60) is novel ribosome-inactivating protein.
Plant J. 1994 Dec;6(6):815-24.
PMID: 7849755 [PubMed - indexed for MEDLINE]

☐ **9:** Winlaw DS, Schyvens CG, Smythe GA, Du Z, Rainer SP, Keogh AM, Mundy JA, Lord RS, Spratt PM, MacDonald PS. Related Article

Urinary nitrate excretion is a noninvasive indicator of ac cardiac allograft rejection and nitric oxide production in rat.
Transplantation. 1994 Nov 15;58(9):1031-6.
PMID: 7974731 [PubMed - indexed for MEDLINE]

☐ **10:** Mundy LM, Lynch MM, Crowley BD, Kelly G, Desmond NM, Mulcahy FM. Related Article

Concomitant HIV and mycobacterial infection in Irelan 1987-92.
Int J STD AIDS. 1994 Nov-Dec;5(6):436-41.
PMID: 7849123 [PubMed - indexed for MEDLINE]

☐ **11:** Kodavanti PR, Shafer TJ, Ward TR, Mundy WR, Freudenrich T, Harry GJ, Tilson HA. Related Article

Differential effects of polychlorinated biphenyl congen phosphoinositide hydrolysis and protein kinase C translocation in rat cerebellar granule cells.
Brain Res. 1994 Oct 31;662(1-2):75-82.
PMID: 7859093 [PubMed - indexed for MEDLINE]

☐ **12:** Cockle SM, Prater GV, Thetford CR, Hamilton C, Malone PR, Mundy AR. Related Article

Peptides related to thyrotrophin-releasing hormone (TR human prostate and semen.
Biochim Biophys Acta. 1994 Oct 21;1227(1-2):60-6.
PMID: 7522575 [PubMed - indexed for MEDLINE]

13: Mundy DI. Related Article

Identification of the multicatalytic enzyme as a possible gamma-secretase for the amyloid precursor protein.
Biochem Biophys Res Commun. 1994 Oct 14;204(1):333-41.
PMID: 7945379 [PubMed - indexed for MEDLINE]

14: Leah R, Skriver K, Knudsen S, Ruud-Hansen J, Raikhel NV, Mundy J. Related Article

Identification of an enhancer/silencer sequence directin aleurone-specific expression of a barley chitinase gene.
Plant J. 1994 Oct;6(4):579-89.
PMID: 7987416 [PubMed - indexed for MEDLINE]

15: Wehman P, Booth M, Stallard D, Mundy A, Sherron P, West M, Cifu D. Related Article

Return to work for persons with traumatic brain injury a spinal cord injury: three case studies.
Int J Rehabil Res. 1994 Sep;17(3):268-77. No abstract available
PMID: 8002134 [PubMed - indexed for MEDLINE]

16: Mundy AJ, Ryder TA, Edmonds DK. Related Article

Morphometric characteristics of motile spermatozoa in subfertile men with an excess of non-sperm cells in the ejaculate.
Hum Reprod. 1994 Sep;9(9):1701-4.
PMID: 7836521 [PubMed - indexed for MEDLINE]

17: Mundy GR. Related Article

Peptides and growth regulatory factors in bone.
Rheum Dis Clin North Am. 1994 Aug;20(3):577-88. Review.
PMID: 7984779 [PubMed - indexed for MEDLINE]

18: Mundy RR, Moore SC, Corey JB, Mundy GD. Related Article

Disability syndrome: the effects of early vs delayed rehabilitation intervention.
AAOHN J. 1994 Aug;42(8):379-83.
PMID: 7945588 [PubMed - indexed for MEDLINE]

☐ **19:** Porteous IS, Mundy NI, Grall C. Related Article

Use of intrauterine devices as a means of contraception colony of chimpanzees (Pan troglodytes).
J Med Primatol. 1994 Aug;23(6):355-61.
PMID: 7897642 [PubMed - indexed for MEDLINE]

☐ **20:** Gaydos CA, Eiden JJ, Oldach D, Mundy LM, Auwaerter P, Warner ML, Vance E, Burton AA, Quinn TC. Related Article

Diagnosis of Chlamydia pneumoniae infection in patier with community-acquired pneumonia by polymerase ch reaction enzyme immunoassay.
Clin Infect Dis. 1994 Jul;19(1):157-60.
PMID: 7948521 [PubMed - indexed for MEDLINE]

☐ **21:** Ruskin EM, Kasari C, Mundy P, Sigman M. Related Article

Attention to people and toys during social and object m in children with Down syndrome.
Am J Ment Retard. 1994 Jul;99(1):103-11.
PMID: 7946251 [PubMed - indexed for MEDLINE]

☐ **22:** Feng JQ, Harris MA, Ghosh-Choudhury N, Feng M, Mundy GR, Harris SE. Related Article

Structure and sequence of mouse bone morphogenetic protein-2 gene (BMP-2): comparison of the structures a promoter regions of BMP-2 and BMP-4 genes.
Biochim Biophys Acta. 1994 Jun 21;1218(2):221-4.
PMID: 8018727 [PubMed - indexed for MEDLINE]

☐ **23:** Mundy GR. Related Article

Evaluation and treatment of hypercalcemia.
Hosp Pract (Off Ed). 1994 Jun 15;29(6):79-84; discussion 84-6 abstract available.
PMID: 8207113 [PubMed - indexed for MEDLINE]

☐ **24:** Harris SE, Bonewald LF, Harris MA, Sabatini M, Dallas S, Feng JQ, Ghosh-Choudhury N, Wozney J, Mundy GR. Related Article

Effects of transforming growth factor beta on bone nod formation and expression of bone morphogenetic protei osteocalcin, osteopontin, alkaline phosphatase, and type collagen mRNA in long-term cultures of fetal rat calvar

osteoblasts.
J Bone Miner Res. 1994 Jun;9(6):855-63.
PMID: 8079661 [PubMed - indexed for MEDLINE]

25: Dixson AF, Mundy NI. Related Article

Sexual behavior, sexual swelling, and penile evolution i chimpanzees (Pan troglodytes).
Arch Sex Behav. 1994 Jun;23(3):267-80.
PMID: 8024440 [PubMed - indexed for MEDLINE]

26: Yoneda T, Takaoka Y, Boyce BF, Scott L, Mundy GR. Related Article

Extracts of porcine pancreas prevent progression of hypercalcemia and cachexia and prolong survival in nu mice bearing a human squamous carcinoma.
Cancer Res. 1994 May 1;54(9):2509-13.
PMID: 8162601 [PubMed - indexed for MEDLINE]

27: Shafer TJ, Nostrandt AC, Tilson HA, Mundy WR. Related Article

Mechanisms underlying AlCl3 inhibition of agonist-stimulated inositol phosphate accumulation. Role of cal G-proteins, phospholipase C and protein kinase C.
Biochem Pharmacol. 1994 Apr 20;47(8):1417-25.
PMID: 8185649 [PubMed - indexed for MEDLINE]

28: Mundy AJ, Ryder TA, Edmonds DK. Related Article

A quantitative study of sperm head ultrastructure in sub males with excess sperm precursors.
Fertil Steril. 1994 Apr;61(4):751-4.
PMID: 8150121 [PubMed - indexed for MEDLINE]

29: Harris SE, Harris MA, Mahy P, Wozney J, Feng JQ, Mundy GR. Related Article

Expression of bone morphogenetic protein messenger R by normal rat and human prostate and prostate cancer c
Prostate. 1994 Apr;24(4):204-11.
PMID: 8146069 [PubMed - indexed for MEDLINE]

30: Dallas SL, Park-Snyder S, Miyazono K, Twardzik D, Mundy GR, Bonewald LF. Related Article

Characterization and autoregulation of latent transformi

growth factor beta (TGF beta) complexes in osteoblast-cell lines. Production of a latent complex lacking the lat TGF beta-binding protein.
J Biol Chem. 1994 Mar 4;269(9):6815-21.
PMID: 8120044 [PubMed - indexed for MEDLINE]

☐ **31:** Harris SE, Sabatini M, Harris MA, Feng JQ, Wozney J, Mundy GR. Related Article

Expression of bone morphogenetic protein messenger R in prolonged cultures of fetal rat calvarial cells.
J Bone Miner Res. 1994 Mar;9(3):389-94.
PMID: 8191933 [PubMed - indexed for MEDLINE]

☐ **32:** Mundy CM, Gilcreast DM. Related Article

Organizational downsizing and closure in two U.S. Arn hospitals.
Mil Med. 1994 Mar;159(3):224-6. No abstract available.
PMID: 8041469 [PubMed - indexed for MEDLINE]

☐ **33:** Shaughnessy LW, Barone S Jr, Mundy WR, Herr DW, Tilson HA. Related Article

Comparison of intracranial infusions of colchicine and ibotenic acid as models of neurodegeneration in the bas forebrain.
Brain Res. 1994 Feb 21;637(1-2):15-26.
PMID: 8180792 [PubMed - indexed for MEDLINE]

☐ **34:** Peloso JG, Mundy GD, Cohen ND. Related Article

Prevalence of, and factors associated with, musculoskel racing injuries of thoroughbreds.
J Am Vet Med Assoc. 1994 Feb 15;204(4):620-6.
PMID: 8163419 [PubMed - indexed for MEDLINE]

☐ **35:** Nishihara T, Ohsaki Y, Ueda N, Saito N, Mundy GR. Related Article

Mouse interleukin-1 receptor antagonist induced by Actinobacillus actinomycetemcomitans lipopolysaccha blocks the effects of interleukin-1 on bone resorption a osteoclast-like cell formation.
Infect Immun. 1994 Feb;62(2):390-7.
PMID: 8300200 [PubMed - indexed for MEDLINE]

36: Mundy WR, Kodavanti PR, Dulchinos VF, Tilson HA. Related Article

Aluminum alters calcium transport in plasma membran endoplasmic reticulum from rat brain.
J Biochem Toxicol. 1994 Feb;9(1):17-23.
PMID: 8151628 [PubMed - indexed for MEDLINE]

37: Mundy GR. Related Article

Osteoporosis. Boning up on genes.
Nature. 1994 Jan 20;367(6460):216-7. No abstract available.
PMID: 8121486 [PubMed - indexed for MEDLINE]

38: Ruskin EM, Mundy P, Kasari C, Sigman M. Related Article

Object mastery motivation of children with Down synd
Am J Ment Retard. 1994 Jan;98(4):499-509.
PMID: 8148126 [PubMed - indexed for MEDLINE]

39: Ghosh-Choudhury N, Harris MA, Feng JQ, Mundy GR, Harris SE. Related Article

Expression of the BMP 2 gene during bone cell differentiation.
Crit Rev Eukaryot Gene Expr. 1994;4(2-3):345-55. Review.
PMID: 7881166 [PubMed - indexed for MEDLINE]

40: Tandon P, Barone S Jr, Mundy WR, Tilson HA. Related Article

Compensatory changes in the hippocampus following intradentate infusion of colchicine.
Neurotoxicology. 1994 Fall;15(3):513-24. Review.
PMID: 7854585 [PubMed - indexed for MEDLINE]

41: Yoneda T, Sasaki A, Mundy GR. Related Article

Osteolytic bone metastasis in breast cancer.
Breast Cancer Res Treat. 1994;32(1):73-84. Review.
PMID: 7819589 [PubMed - indexed for MEDLINE]

42: Gausing K. Related Article

Lipid transfer protein genes specifically expressed in ba leaves and coleoptiles.
Planta. 1994;192(4):574-80.
PMID: 7764621 [PubMed - indexed for MEDLINE]

43: Ancrenaz M, Lackman-Ancrenaz I, Mundy N. Related Article

Field observations of aye-ayes (Daubentonia madagascariensis) in Madagascar.
Folia Primatol (Basel). 1994;62(1-3):22-36.
PMID: 7721206 [PubMed - indexed for MEDLINE]

44: Stanton ME, Mundy WR, Ward T, Dulchinos V, Barry CC. Related Article

Time-dependent effects of acute chlorpyrifos administra on spatial delayed alternation and cholinergic neurochei in weanling rats.
Neurotoxicology. 1994 Spring;15(1):201-8.
PMID: 7522308 [PubMed - indexed for MEDLINE]

45: Izbicka E, Niewolna M, Yoneda T, Lowe C, Boyce B, Mundy G. Related Article

pp60 c-src expression and activity in MG-63 osteoblast cells modulated by PTH but not required for PTH-medi adenylate cyclase response.
J Bone Miner Res. 1994 Jan;9(1):127-32.
PMID: 7512305 [PubMed - indexed for MEDLINE]

46: Mundy GR. Related Article

Role of cytokines in bone resorption.
J Cell Biochem. 1993 Dec;53(4):296-300. Review.
PMID: 8300746 [PubMed - indexed for MEDLINE]

47: Mundy GR. Related Article

Cytokines and growth factors in the regulation of bone remodeling.
J Bone Miner Res. 1993 Dec;8 Suppl 2:S505-10. Review.
PMID: 7510095 [PubMed - indexed for MEDLINE]

48: Shafer TJ, Mundy WR, Tilson HA. Related Article

Aluminum decreases muscarinic, adrenergic, and metabotropic receptor-stimulated phosphoinositide hydrolysis in hippocampal and cortical slices from rat b
Brain Res. 1993 Nov 26;629(1):133-40.
PMID: 8287268 [PubMed - indexed for MEDLINE]

49: Riancho JA, Zarrabeitia MT, Mundy GR, Yoneda T, Gonzalez-Macias J. Related Article

Effects of interleukin-4 on the formation of macrophag

osteoclast-like cells.
J Bone Miner Res. 1993 Nov;8(11):1337-44.
PMID: 8266825 [PubMed - indexed for MEDLINE]

50: Yoneda T, Kato I, Bonewald LF, Burgess WH, Mundy GR. Related Article

A novel cytokine with osteoclastopoietic activity.
J Periodontal Res. 1993 Nov;28(6 Pt 2):521-2. No abstract avai
PMID: 8263724 [PubMed - indexed for MEDLINE]

51: Lebrun JB, Moffatt ME, Mundy RJ, Sangster RK, Postl BD, Dooley JP, Dilling LA, Godel JC, Haworth JC. Related Article

Vitamin D deficiency in a Manitoba community.
Can J Public Health. 1993 Nov-Dec;84(6):394-6.
PMID: 8131142 [PubMed - indexed for MEDLINE]

52: Roberts MM, To LB, Gillis D, Mundy J, Rawling C, Ng K, Juttner CA. Related Article

Immune reconstitution following peripheral blood stem transplantation, autologous bone marrow transplantatio allogeneic bone marrow transplantation.
Bone Marrow Transplant. 1993 Nov;12(5):469-75.
PMID: 7905331 [PubMed - indexed for MEDLINE]

53: Kodavanti PR, Mundy WR, Tilson HA, Harry GJ. Related Article

Effects of selected neuroactive chemicals on calcium transporting systems in rat cerebellum and on survival c cerebellar granule cells.
Fundam Appl Toxicol. 1993 Oct;21(3):308-16.
PMID: 8258384 [PubMed - indexed for MEDLINE]

54: Yoneda T, Niewolna M, Lowe C, Izbicka E, Mundy GR. Related Article

Hormonal regulation of pp60c-src expression during osteoclast formation in vitro.
Mol Endocrinol. 1993 Oct;7(10):1313-8.
PMID: 7505394 [PubMed - indexed for MEDLINE]

55: Winett RA, Anderson ES, Moore JF, Taylor CD, Hook RJ, Webster DA, Neubauer TE, Harden MC, Mundy LL. Related Article

Efficacy of a home-based human immunodeficiency vi
prevention video program for teens and parents.
Health Educ Q. 1993 Winter;20(4):555-67.
PMID: 8307772 [PubMed - indexed for MEDLINE]

56: Beier RC, Norman JO, Reagor JC, Rees MS, Mundy BP. Related Article

Isolation of the major component in white snakeroot th
toxic after microsomal activation: possible explanation
sporadic toxicity of white snakeroot plants and extracts.
Nat Toxins. 1993;1(5):286-93.
PMID: 8167948 [PubMed - indexed for MEDLINE]

57: Zhang WQ, Mundy WR, Thai L, Hudson PM, Gallagher M, Tilson HA, Hong JS. Related Article

Decreased glutamate release correlates with elevated
dynorphin content in the hippocampus of aged rats with
spatial learning deficits.
Hippocampus. 1991 Oct;1(4):391-7.
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Department of Neurology, Baylor College of Medicine, Houston, TX 77030.

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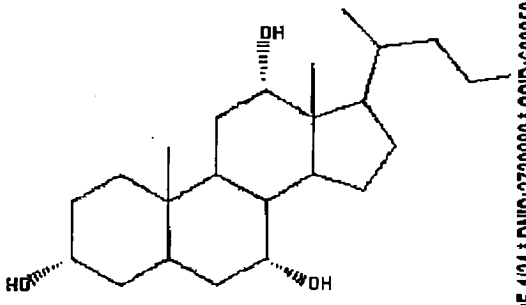

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1. L.M. Hjelmeland, *Proc. Natl. Acad. Sci. USA*, **77**, 6368 (1980)

2. W.F. Simonds, G. Koski, R.A. Streaty, L.M. Hjelmeland, W.A. Klee, *Proc. Natl. Acad. Sci. USA*, **77**, 4623 (1980)

3. D.S. Liscia, T. Alhadi, B.K. Vonderhaar, *J. Biol. Chem.*, **257**, 9401 (1982)

4. W. Gaertner, D. Ulrich, K. Vogt, *Photochem. Photobiol.*, **54**, 1047 (1991)

5. H.H. Hassanain, W. Dai, S.L. Gupta, *Anal. Chem.*, **213**, 162 (1993)

6. W. Hu, T. Takeuchi, H. Haraguchi, *Anal. Chem.*, **65**, 2204 (1993)

7. P. Banerjee, J.B. Joo, J.T. Buse, G. Dawson, *Chem. Phys. Lipids*, **77**, 65 (1995)

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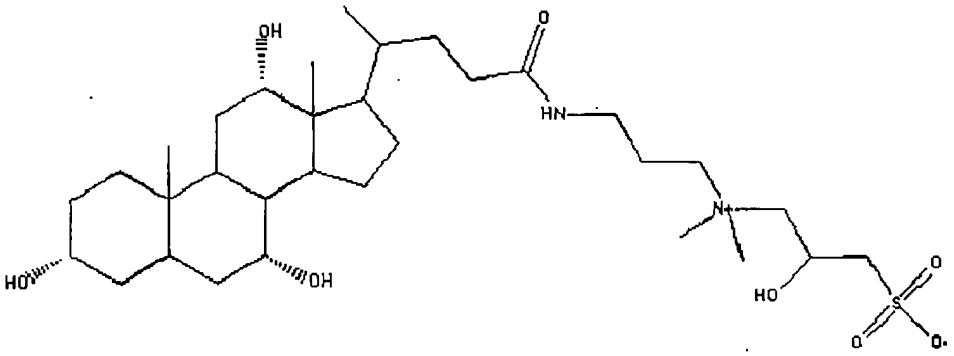

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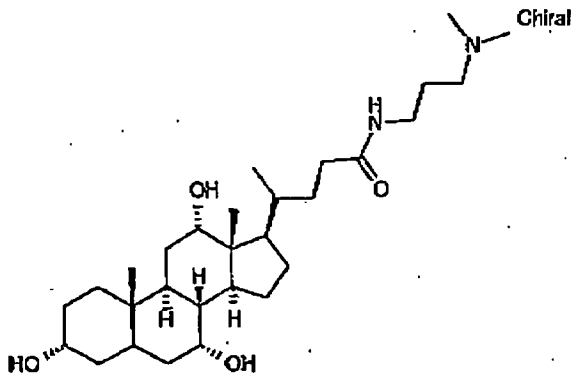

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Identification of the Multicatalytic Enzyme as a Possible γ-Secretase for the Amyloid Precursor Protein

Mundy D. I.

Baylor Coll Med, Dept Neurol, Houston, TX 77030, USA

Available online 29 April 2002.

Abstract

One of the main components of the senile plaques in brain tissue from patients with Alzheimer's disease is the β-amyloid peptide. This peptide is proteolytically cleaved from the amyloid precursor protein

by the action of at least two proteases, a β-secretase which generates the N-terminus and a γ-secretase which generates the C-terminus. Neither of these proteases have been identified. To identify proteases that are candidates for the γ-secretase we synthesized a small fluorescent peptide substrate containing the amino acids comprising the C-terminus of the longest β-amyloid peptide identified. This substrate is hydrolyzed by a single activity in homogenates from both cells and brain tissue and we have demonstrated that this activity is the multicatalytic enzyme or proteasome. Furthermore, using specific inhibitors, we have demonstrated that the fluorescent substrate is hydrolyzed by the chymotrypsin-like activity of the multicatalytic enzyme.

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L1            2 CHAPSO

=> d bib ab
'BIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
'AB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual
fields or predefined formats.  The predefined substance formats
are:  (RN = CAS Registry Number)

REG     - RN
SAM     - Index Name, MF, and structure - no RN
FIDE    - All substance data, except sequence data
IDE     - FIDE, but only 50 names
SQIDE   - IDE, plus sequence data
SQIDE3  - Same as SQIDE, but 3-letter amino acid codes are used
SQD     - Protein sequence data, includes RN
SQD3    - Same as SQD, but 3-letter amino acid codes are used
SQN     - Protein sequence name information, includes RN

CALC    - Table of calculated properties
EPROP   - Table of experimental properties
PROP    - EPROP and CALC

Any CA File format may be combined with any substance format to
obtain CA references citing the substance.  The substance formats
must be cited first.  The CA File predefined formats are:

ABS  -- Abstract
APPS -- Application and Priority Information
BIB  -- CA Accession Number, plus Bibliographic Data
CAN  -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND  -- Index Data
IPC  -- International Patent Classification
PATS -- PI, SO
STD  -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when
it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented,
with text labels.

For additional information, please consult the following help
messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):help dfields
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The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN
SAM - Index Name, MF, and structure - no RN
FIDE - All substance data, except sequence data
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SQD - Protein sequence data, includes RN
SQD3 - Same as SQD, but 3-letter amino acid codes are used
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CALC - Table of calculated properties
EPROP - Table of experimental properties
PROP - EPROP and CALC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract
APPS -- Application and Priority Information
BIB -- CA Accession Number, plus Bibliographic Data
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
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The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):iall

L1 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN
RN 169149-55-7 REGISTRY
ED Entered STN: 20 Oct 1995
CN **BisCHAPSO (9CI)** (CA INDEX NAME)
MF Unspecified

CI MAN
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PRP (Properties)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

ACCESSION NUMBER: 123:260401 CA
TITLE: Calculation of partial specific volumes of detergents and lipids
AUTHOR(S): Durchschlag, Helmut; Zipper, Peter
CORPORATE SOURCE: Institute of Biophysics and Physical Biochemistry, University of Regensburg, Regensburg, D-93040, Germany
SOURCE: Comunicaciones presentadas a las Jornadas del Comite Espanol de la Detergencia (1995), 26, 275-92
CODEN: CJCDD7; ISSN: 0212-7466
PUBLISHER: Comite Espanol de la Detergencia, Tensioactivos y Afines
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 46-2 (Surface Active Agents and Detergents)
ABSTRACT:
Volumetric properties of surfactants are required for the application of various techniques. As an alternative approach to densimetric expts., ab initio calcns. of partial vols. may be performed. Our previously established calcn. procedure is based on some kind of additivity principle, using the partial molar volume increments for the constituent atoms, ions and/or groups, and some special increments/decrements for covolume, ring formation and ionization. The validity of this approach was also confirmed by a systematic comparison of exptl. and calculated values of different classes of detergents and lipids. The majority of vols. calculated for the monomeric state are already within a range of ±3%, if compared with the exptl. values which in most cases, however, were determined above critical micelle concentration Applying appropriate
volume increments for micellization in certain cases, the volume changes due to the formation of supramol. structures can be taken into account. This enhances the accuracy of predicted vols. of micellar surfactants considerably (±2% in 80% of the cases).

SUPPL. TERM: partial specific vol detergent lipid calcn
INDEX TERM: Detergents
(calcn. of partial sp. vols. of detergents and lipids)
INDEX TERM: Lipids, properties
ROLE: PRP (Properties)
(calcn. of partial sp. vols. of detergents and lipids)
INDEX TERM: Specific volume
(partial, calcn. of partial sp. vols. of detergents and lipids)
INDEX TERM: 9016-45-9, Poly(oxy-1,2-ethanediyl), α-(nonylphenyl)-ω-hydroxy-
ROLE: PRP (Properties)
(Arkopal 9 or Surfonic N-95 or Triton N-101 or Arkopal 13; calcn. of partial sp. vols. of detergents and lipids)
INDEX TERM: 9002-92-0, Polyoxyethylene monododecyl ether
ROLE: PRP (Properties)
(Atlas G 2127 or Lubrol PX or Nopalcol 6L; calcn. of partial sp. vols. of detergents and lipids)
INDEX TERM: 53-60-1, Promazine hydrochloride 56-81-5, Glycerol,

properties 57-09-0, Hexadecyltrimethylammonium bromide 57-88-5, Cholesterol, properties 58-33-3, Promethazine hydrochloride 69-09-0, Chlorpromazine hydrochloride 112-00-5, Dodecyltrimethylammonium chloride 112-02-7, Hexadecyltrimethylammonium chloride 113-52-0, Imipramine hydrochloride 126-92-1, Sodium octyl sulfate 142-87-0, Sodium decyl sulfate 143-19-1, Sodium oleate 145-41-5, Sodium dehydrocholate 145-42-6, Sodium taurocholate 151-21-3, Sodium dodecyl sulfate, properties 302-95-4, Sodium deoxycholate 361-09-1, Sodium cholate 629-25-4, Sodium dodecanoate 751-94-0, Sodium fusidate 863-57-0, Sodium glycocholate 871-95-4, Dimethyldodecylphosphine oxide 1002-62-6, Sodium decanoate 1119-94-4, Dodecyltrimethylammonium bromide 1119-97-7, Tetradecyltrimethylammonium bromide 1180-95-6, Sodium taurodeoxycholate 1191-50-0, Sodium tetradecyl sulfate 1643-20-5, Dimethyldodecylamine oxide 1943-11-9, Nonyltrimethylammonium bromide 2082-84-0, Decyltrimethylammonium bromide 2083-68-3, Octyltrimethylammonium bromide 2190-95-6, Dimethyldecylphosphine oxide 2281-11-0, Zwittergent 3-16 2364-67-2, (-)-Palmitoylcarnitine 2386-53-0, Sodium dodecylsulfonate 2536-13-2, Dimethylnonylamine oxide 2605-78-9, Dimethyloctylamine oxide 2605-79-0, Dimethyldecylamine oxide 2646-38-0, Sodium chenodeoxycholate 3476-42-4 4574-04-3, Tetradecyltrimethylammonium chloride 6009-98-9, Sodium taurochenodeoxycholate 6994-45-2 7305-25-1, 2-(Hexylsulfinyl)ethanol 7305-26-2, 3-(Hexylsulfinyl)propanol 7305-27-3, 4-(Hexylsulfinyl)butanol 7305-29-5, 3-(Octylsulfinyl)propanol 7305-30-8, 2-(Octylsulfinyl)ethanol 7333-16-6, 4-(Octylsulfinyl)butanol 9002-93-1, Triton X-100 9004-77-7, Polyethylene glycol monobutyl ether 9004-95-9, Brij 56 9004-98-2, Brij 96 9005-00-9, Polyoxyethylene monooctadecyl ether 9005-64-5, Tween 20 10124-65-9, Potassium dodecanoate 11024-24-1, Digitonin 13232-68-3, Dimethyloctylphosphine oxide 14933-08-5, Zwittergent 3-12 15163-36-7, Zwittergent 3-10 15178-71-9, Dimethylundecylamine oxide 16409-34-0, Sodium glycodeoxycholate 16564-43-5, Sodium glycochenodeoxycholate 17364-16-8 18656-38-7 25518-54-1, (-)-Lauroylcarnitine 25597-07-3, (-)-Tetradecanoylcarnitine 27252-75-1, Polyoxyethylene monooctyl ether 29836-26-8, Octylglucoside 31726-34-8, Polyoxyethylene monohexyl ether 53892-41-4 64000-90-4, Tetramethylammonium dodecanoate, properties 69227-93-6 75345-50-5, Glycerol monododecyl ether 75621-03-3, CHAPS 82473-24-3, CHAPSO 100031-70-7 136023-79-5 169149-55-7, BisCHAPSO

ROLE: PRP (Properties)
(calcn. of partial sp. vols. of detergents and lipids)

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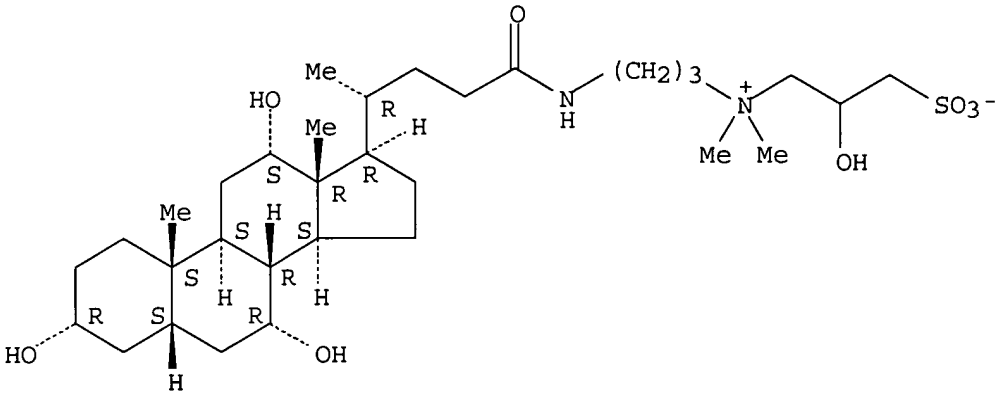
L1 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN
RN 82473-24-3 REGISTRY
ED Entered STN: 16 Nov 1984
CN 1-Propanaminium, 2-hydroxy-N,N-dimethyl-3-sulfo-N-[3-[[(3α,5β,7α,12α)-3,7,12-trihydroxy-24-oxocholan-24-yl]amino]propyl]-, inner salt (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:

CN Cholane, 1-propanaminium deriv.
OTHER NAMES:
CN 3-[(3-Cholamidopropyl)dimethylammonio]-2-hydroxy-1-propanesulfonate
CN **CHAPSO**
FS STEREOSEARCH
DR 120893-60-9
MF C32 H58 N2 O8 S
LC STN Files: ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CHEMCATS, CSCHEM, DDFU, DRUGU, EMBASE, MEDLINE, MRCK*, MSDS-OHS, PIRA, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Ring System Data

Elemental Analysis EA	Elemental Sequence ES	Size of the Rings SZ	Ring System Formula RF	Ring Identifier RID	RID Occurrence Count
C5-C6-C6-C6	C5-C6-C6-C6	5-6-6-6	C17	4432.3.1	1

Absolute stereochemistry.



186 REFERENCES IN FILE CA (1907 TO DATE)
186 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

ACCESSION NUMBER: 142:308767 CA
TITLE: Surface treatment of microchannels of polymeric capillary electrophoresis chips with surfactants
INVENTOR(S): Wang, Hui; Gai, Hongwei; Bai, Jiling; Lin, Bingcheng
PATENT ASSIGNEE(S): Dalian Research Institute of Chemicophysics, Chinese Academy of Sciences, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 12 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
INT. PATENT CLASSIF.:
MAIN: G01N027-447

SECONDARY: G01N033-50; G01N033-543
CLASSIFICATION: 80-2 (Organic Analytical Chemistry)
Section cross-reference(s): 38, 79
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1469120	A	20040121	CN 2002-132623	20020718
PRIORITY APPLN. INFO.:			CN 2002-132623	20020718

ABSTRACT:
The microchannel surface treatment method of polymeric capillary electrophoresis chips is done by electrophoresis the chips in a phosphate buffer solution containing anionic, cationic, amphoteric or nonionic surfactants for electrodialysis current control. The anionic surfactant is sodium decylsulfate, sodium dodecylsulfate, sodium dodecylsulfonate, sodium tetradecylsulfate, polyoxyethylene dodecyl ether sodium sulfate, N-lauroyl-2-methylaminoethane-1-sulfonate, N-dodecyl-L-valine sodium salt, cholic acid, deoxycholic acid, taurocholic acid, and/or perfluoroheptanoic acid. The cationic surfactant is dodecyltrimethylammonium chloride, dodecyltrimethylammonium bromide, tetradecyltrimethylammonium bromide, and/or cetyltrimethylammonium bromide. The amphoteric surfactant is cholamidopropyldimethylaminopropanesulfonic acid and/or cholamidopropyldimethylamino-2-hydroxypropanesulfonic acid. The nonionic surfactant is polyoxyethylene dodecyl ether, octyl glucoside, dodecyl-β-D-maltoside, and/or Triton X- 100.

SUPPL. TERM: PMMA capillary electrophoresis chip microchannel surface treatment; capillary electrophoresis device polymer; anionic cationic amphoteric nonionic surfactant surface treatment

INDEX TERM: Surfactants
(amphoteric; surface treatment of microchannels of polymeric capillary electrophoresis chips with surfactants)

INDEX TERM: Surfactants
(anionic; surface treatment of microchannels of polymeric capillary electrophoresis chips with surfactants)

INDEX TERM: Surfactants
(cationic; surface treatment of microchannels of polymeric capillary electrophoresis chips with surfactants)

INDEX TERM: Surfactants
(nonionic; surface treatment of microchannels of polymeric capillary electrophoresis chips with surfactants)

INDEX TERM: Capillary electrophoresis apparatus
(polymer; surface treatment of microchannels of polymeric capillary electrophoresis chips with surfactants)

INDEX TERM: 75621-03-3 82473-24-3
ROLE: TEM (Technical or engineered material use); USES (Uses)
(amphoteric surfactant; surface treatment of microchannels of polymeric capillary electrophoresis chips with surfactants)

INDEX TERM: 81-24-3, Taurocholic acid 81-25-4, Cholic acid 83-44-3, Deoxycholic acid 142-87-0, Sodium decylsulfate 151-21-3, Sodium dodecylsulfate, uses 375-85-9, Perfluoroheptanoic acid 1191-50-0 2386-53-0, Sodium dodecylsulfonate 3737-57-3 9004-82-4, Polyoxyethylene dodecyl ether sodium sulfate 37869-33-3, Sodium N-lauroylvaline
ROLE: TEM (Technical or engineered material use); USES (Uses)
(anionic surfactant; surface treatment of microchannels of polymeric capillary electrophoresis chips with surfactants)

INDEX TERM: 57-09-0, Cetyltrimethylammonium bromide 112-00-5, Dodecyltrimethylammonium chloride 1119-94-4, Dodecyltrimethylammonium bromide 1119-97-7, Tetradecyltrimethylammonium bromide
ROLE: TEM (Technical or engineered material use); USES (Uses) (cationic surfactant; surface treatment of microchannels of polymeric capillary electrophoresis chips with surfactants)
INDEX TERM: 9002-92-0, Brij 35 9002-93-1, Triton X-100 29836-26-8, Octyl glucoside 69227-93-6, Dodecyl-β-D-maltoside
ROLE: TEM (Technical or engineered material use); USES (Uses) (nonionic surfactant; surface treatment of microchannels of polymeric capillary electrophoresis chips with surfactants)
INDEX TERM: 9011-14-7, Polymethyl methacrylate
ROLE: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (surface treatment of microchannels of polymeric capillary electrophoresis chips with surfactants)

REFERENCE 2

ACCESSION NUMBER: 142:217428 CA
TITLE: Conjugated linoleic acid production from castor oil by Lactobacillus plantarum JCM 1551
AUTHOR(S): Ando, Akinori; Ogawa, Jun; Kishino, Shigenobu; Shimizu, Sakayu
CORPORATE SOURCE: Division of Applied Life Sciences, Graduate School of Agriculture, Kyoto University, Sakyo-ku, Kyoto, 606-8502, Japan
SOURCE: Enzyme and Microbial Technology (2004), 35(1), 40-45
CODEN: EMTED2; ISSN: 0141-0229
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 16-2 (Fermentation and Bioindustrial Chemistry)
Section cross-reference(s): 7

ABSTRACT:
The conditions for conjugated linoleic acid (CLA) production from castor oil, in which the main fatty acid component is ricinoleic acid, were investigated using washed cells of Lactobacillus plantarum JCM 1551 as the catalyst. In the presence of lipase, castor oil became an effective substrate for CLA production by the bacterium. Lipase M "Amano" 10 supported CLA production most effectively among the lipases tested. The addition of a detergent, especially Lubrol PX, enhanced the CLA
production The CLA produced comprised a mixture of two isomers, i.e. cis-9,trans-11-octadecadienoic acid (CLA1) and trans-9,trans-11-octadecadienoic acid (CLA2). Under the optimum conditions (1.0 M sodium citrate buffer, pH 6.0, 37°C) with castor oil as the substrate and washed cells of L. plantarum (12%, wet cell w/v) as the catalyst, 2.7 mg/mL CLA was produced from 5.0 mg/mL castor oil in 99 h (productivity, 0.027 mg/mL/h), and 7.5 mg/mL CLA from 30 mg/mL castor oil in 171 h (productivity, 0.044 mg/mL/h). In the former case, the CLA produced accounted for 45.5% of the total fatty acids obtained, and consisted of CLA1 (26%) and CLA2 (74%).

SUPPL. TERM: Lactobacillus castor oil conjugated linoleic acid
INDEX TERM: pH
(biol. effects of; conjugated linoleic acid production from castor oil by Lactobacillus plantarum JCM 1551)
INDEX TERM: Enzymes, uses
ROLE: BCP (Biochemical process); CAT (Catalyst use); BIOL (Biological study); PROC (Process); USES (Uses)
(com.; conjugated linoleic acid production from castor oil by

Lactobacillus plantarum JCM 1551)

INDEX TERM: Detergents
Lactobacillus plantarum
Temperature effects, biological
(conjugated linoleic acid production from castor oil by Lactobacillus plantarum JCM 1551)

INDEX TERM: Castor oil
ROLE: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(conjugated linoleic acid production from castor oil by Lactobacillus plantarum JCM 1551)

INDEX TERM: Hydrolysis
(enzymic; conjugated linoleic acid production from castor oil by Lactobacillus plantarum JCM 1551)

INDEX TERM: Albumins, processes
ROLE: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(serum, bovine; conjugated linoleic acid production from castor oil by Lactobacillus plantarum JCM 1551)

INDEX TERM: 60-33-3, Linoleic acid, processes 141-22-0, Ricinoleic acid 302-95-4, Sodium deoxycholate 557-04-0, SM 1000 683-10-3 6004-24-6, N-Hexadecylpyridinium chloride monohydrate 9002-92-0, Lubrol PX 9002-93-1, Triton x-305 9005-64-5, Tween 20 9005-65-6, Tween 80 9016-45-9, Triton N101 9036-19-5, Nonidet p_40 25301-02-4, Triton wr-1339 60864-33-7, Triton Cf-10 69227-93-6, N-Dodecyl-β-D-maltoside 75621-03-3, CHAPS 82473-24-3, CHAPSO 85618-20-8 86303-22-2, BIGCHAP 86303-23-3, Deoxy_BIGCHAP
ROLE: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(conjugated linoleic acid production from castor oil by Lactobacillus plantarum JCM 1551)

INDEX TERM: 9001-62-1, Lipase M Amano 10
ROLE: BCP (Biochemical process); CAT (Catalyst use); BIOL (Biological study); PROC (Process); USES (Uses)
(conjugated linoleic acid production from castor oil by Lactobacillus plantarum JCM 1551)

INDEX TERM: 544-71-8P, trans-9,trans-11-Octadecadienoic acid 2540-56-9P, cis-9,trans-11-Octadecadienoic acid
ROLE: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)
(conjugated linoleic acid production from castor oil by Lactobacillus plantarum JCM 1551)

INDEX TERM: 34932-12-2P
ROLE: BYP (Byproduct); PREP (Preparation)
(conjugated linoleic acid production from castor oil by Lactobacillus plantarum JCM 1551)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):

(1) Ando, A; J Am Oil Chem Soc 2003, V80, P889 CAPLUS
(2) Bligh, E; Can J Biochem Physiol 1959, V37, P911 CAPLUS
(3) Chin, S; J Food Comp Anal 1992, V5, P185 CAPLUS
(4) Ha, Y; Carcinogenesis 1987, V8, P1881 CAPLUS
(5) Haas, M; Lipids 1999, V34, P979 CAPLUS
(6) Ip, C; Cancer Res 1991, V51, P6118 CAPLUS
(7) Jareonkitmongkol, S; J Gen Microbiol 1992, V138, P997 CAPLUS
(8) Kishino, S; Biosci Biotechnol Biochem 2002, V66, P2283 CAPLUS
(9) Kishino, S; Biosci Biotechnol Biochem 2003, V67, P179 CAPLUS
(10) Kishino, S; J Am Oil Chem Soc 2002, V79, P159 CAPLUS

(11) Mounts, T; Lipids 1970, V5, P997 CAPLUS
(12) Nicolosi, R; Artery 1997, V22, P266 CAPLUS
(13) Ogawa, J; Appl Environ Microbiol 2001, V67, P1246 CAPLUS
(14) Shimizu, S; Arch Microbiol 1991, V156, P163 CAPLUS

REFERENCE 3

ACCESSION NUMBER: 142:110116 CA
TITLE: Methods and kits for obtaining nucleic acid from biological samples
INVENTOR(S): Montesclaros, Luz; Greenfield, I. Lawrence
PATENT ASSIGNEE(S): Applera Corporation, USA
SOURCE: U.S. Pat. Appl. Publ., 29 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: C12Q001-68
SECONDARY: C12N001-08
US PATENT CLASSIF.: 435006000
CLASSIFICATION: 9-16 (Biochemical Methods)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005009036	A1	20050113	US 2003-618493	20030711
WO 2005007895	A1	20050127	WO 2004-US22250	20040709

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-618493 20030711
ABSTRACT:
Methods and kits for isolating nucleic acids from a sample, typically a biol. sample are disclosed. In certain embodiments, the methods and kits of the invention comprise at least one protease and at least one solid phase. In certain embodiments, the methods and kits of the invention comprise at least one chaotrope and at least one solid phase. In certain embodiments, the inventive methods and kits further comprise at least one chaotrope, at least one zwitterionic compound, at least one cationic detergent, at least one non-ionic detergent, or combinations thereof.

SUPPL. TERM: kit nucleic acid biol
INDEX TERM: Named reagents and solutions
Named reagents and solutions
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(CPD; methods and kits for obtaining nucleic acid from biol. samples)
INDEX TERM: Betaines
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(C12-14-alkyldimethyl; methods and kits for obtaining nucleic acid from biol. samples)

INDEX TERM: Detergents
(cationic; methods and kits for obtaining nucleic acid from biol. samples)
INDEX TERM: Animal tissue culture
Anticoagulants
Bacillus licheniformis
Blood analysis
Human
Test kits
Zwitterions
(methods and kits for obtaining nucleic acid from biol. samples)
INDEX TERM: DNA
Nucleic acids
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(methods and kits for obtaining nucleic acid from biol. samples)
INDEX TERM: Detergents
(nonionic; methods and kits for obtaining nucleic acid from biol. samples)
INDEX TERM: 9014-01-1, Subtilisin
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(Carlsberg; methods and kits for obtaining nucleic acid from biol. samples)
INDEX TERM: 50-01-1, Guanidine hydrochloride 57-09-0, Cetyltrimethylammonium bromide 57-13-6, Urea, biological studies 60-00-4, EDTA, biological studies 62-56-6, Thiourea, biological studies 112-00-5, Dodecyltrimethylammonium chloride 112-02-7, Cetyltrimethylammonium chloride 311-28-4, Tetrabutylammonium iodide 333-20-0, Potassium thiocyanate 540-72-7, Sodium thiocyanate 593-84-0, Guanidinium thiocyanate 631-40-3, Tetrapropylammonium iodide 1112-67-0, Tetrabutylammonium chloride 1119-94-4, Dodecyltrimethylammonium bromide 1119-97-7, Tetradecyltrimethylammonium bromide 1643-19-2, Tetrabutylammonium bromide 1643-20-5, Lauryldimethylamine N-oxide 1941-30-6, Tetrapropylammonium bromide 2082-84-0, Decyltrimethylammonium bromide 2281-11-0, n-Hexadecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate 2644-64-6, Dipalmitoylphosphatidylcholine 4574-04-3, Tetradecyltrimethylammonium chloride 5810-42-4, Tetrapropylammonium chloride 7447-40-7, Potassium chloride, biological studies 7447-41-8, Lithium chloride, biological studies 7550-35-8, Lithium bromide 7601-89-0, Sodium perchlorate 7631-86-9, Silica, biological studies 7647-15-6, Sodium bromide, biological studies 7681-11-0, Potassium iodide, biological studies 7681-82-5, Sodium iodide, biological studies 7758-02-3, Potassium bromide, biological studies 9001-72-3, Pancreatic protease 9002-07-7, Trypsin 9004-07-3, Chymotrypsin 9005-49-6, Heparin, biological studies 9036-06-0, Pronase 9073-78-3, Thermolysin 10377-51-2, Lithium iodide 13177-41-8, n-Octadecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate 14933-08-5, n-Dodecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate 14933-09-6, n-Tetradecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate 15163-30-1, N-Dodecyl-N,N-(dimethylammonio) butyrate 15163-36-7, n-Decyl-N,N-dimethyl-3-ammonio-1-propanesulfonate 15178-76-4, n-Octyl-N,N-dimethyl-3-ammonio-1-propanesulfonate 15471-17-7 15510-55-1,

Dodecyltriphenylphosphonium bromide 28608-79-9, Dodecylbetaine 29557-51-5, N-Dodecylphosphocholine 37259-58-8, Proteinase T 38880-58-9 39450-01-6 42613-33-2, Dispase 53255-89-3 58066-85-6, N-Hexadecylphosphocholine 68207-00-1, Dodecylethyldimethylammonium bromide 69772-87-8, Thermitase 70504-28-8 75621-03-3, 3-[(3-Cholamidopropyl)dimethylammonio]-1-propanesulfonate 77733-28-9 81239-45-4 82473-24-3, 3-[(3-Cholamidopropyl)dimethylammonio]-2-hydroxy-1-propanesulfonate 86303-22-2, BigCHAP 104702-33-2 120139-52-8 121150-44-5 129274-39-1 160255-06-1 160788-56-7 193695-21-5 253678-64-7 557788-85-9 675126-15-5 823796-65-2 823796-66-3
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(methods and kits for obtaining nucleic acid from biol. samples)

REFERENCE 4

ACCESSION NUMBER: 141:420080 CA
TITLE: Amantadine partition and localization in phospholipid membrane: a solution NMR study
AUTHOR(S): Wang, Junfeng; Schnell, Jason R.; Chou, James J.
CORPORATE SOURCE: Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, Boston, MA, 02115, USA
SOURCE: Biochemical and Biophysical Research Communications (2004), 324(1), 212-217
CODEN: BBRCA9; ISSN: 0006-291X
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 1-5 (Pharmacology)
Section cross-reference(s): 9

ABSTRACT:
Quantification of membrane partition potential of drug compds. is of great pharmaceutical interest. Here, a novel approach combining liquid-state NMR diffusion measurements and fast-tumbling lipid/detergent bicelles is used to measure accurately the partition coefficient Kp of amantadine in phospholipid bilayers. Amantadine is found to have a strong membrane partition potential, with Kp of 27.6 in DMPC and 37.8 in POPC lipids. Electrostatic interaction also plays a major role in the drug's affinity towards biol. membrane as introduction of neg. charged POPG dramatically increases its Kp. Saturation transfer difference expts. in small bicelles indicate that amantadine localizes near the neg. charged phosphate group and the hydrocarbon chain of bilayer lipid. The approach undertaken in this study is generally applicable for characterizing interactions between small mols. and phospholipid membranes.

SUPPL. TERM: amantadine phospholipid membrane partition lipid detergent bicelle NMR
INDEX TERM: Influenza
(A; soln NMR anal. of amantadine partition and localization in phospholipid membrane)
INDEX TERM: Membrane, biological
(bilayer; soln NMR anal. of amantadine partition and localization in phospholipid membrane)
INDEX TERM: NMR spectroscopy
(liquid-state; soln NMR anal. of amantadine partition and localization in phospholipid membrane)
INDEX TERM: Molecular association
(of amantadine and DMPC; soln NMR anal. of amantadine

partition and localization in phospholipid membrane)

INDEX TERM: Antiviral agents
Diffusion
Electrostatic force
Influenza A virus
Partition
(soln NMR anal. of amantadine partition and localization in phospholipid membrane)

INDEX TERM: Phospholipids, biological studies
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(soln NMR anal. of amantadine partition and localization in phospholipid membrane)

INDEX TERM: 768-94-5, Amantadine 18194-24-6, 1,2-Dimyristoyl-sn-glycero-3-phosphocholine 26853-31-6, Popc 34506-67-7, 1,2-Dicaproyl-sn-glycero-3-phosphocholine 82473-24-3, CHAPSO 185435-28-3, POPG
ROLE: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(soln NMR anal. of amantadine partition and localization in phospholipid membrane)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD.

(1) Astrahan, P; Proteins:Struct Funct Bioinf 2004, V55, P251 CAPLUS
(2) Burns, R; J Am Chem Soc 1982, V104, P430 CAPLUS
(3) Chou, J; J Am Chem Soc 2002, V124, P2450 CAPLUS
(4) Chou, J; J Biomol NMR 2004, V29, P299 CAPLUS
(5) Duff, K; Biochim Biophys Acta 1993, P149 CAPLUS
(6) Epand, R; J Biol Chem 1987, V262, P1526 CAPLUS
(7) Gaemers, S; J Am Chem Soc 2001, V123, P12343 CAPLUS
(8) Glover, K; Biophys J 2001, V81, P2163 CAPLUS
(9) Hay, A; EMBO J 1985, V4, P3021 CAPLUS
(10) Hjelmeland, L; Anal Biochem 1983, V130, P72 CAPLUS
(11) Holz, M; J Magn Reson 1991, V92, P115 CAPLUS
(12) Johannesson, H; J Chem Phys 1996, V104, P6807 CAPLUS
(13) Mannhold, R; Drug-Membrane Interactions:Analysis, Drug Distribution, Modelling 2000
(14) Mayer, M; Angew Chem Int Ed 1999, V38, P1784 CAPLUS
(15) Mills, R; J Phys Chem 1973, V77, P685 CAPLUS
(16) Oxford, J; Pharmacol Ther 1980, V11, P181 CAPLUS
(17) Pinto, L; Cell 1992, V69, P517 CAPLUS
(18) Pinto, L; Trends Microbiol 1995, V3, P271 MEDLINE
(19) Price, W; Concepts Magn Reson 1997, V9, P299 CAPLUS
(20) Sanders, C; Structure Fold Des 1998, V6, P1227 CAPLUS
(21) Sangster, J; Octanol-Water Partition Coefficients:Fundamentals and Physical Chemistry 1997
(22) Sklenar, V; J Magn Reson A 1993, V102, P241 CAPLUS
(23) Subczynski, W; J Pharm Sci 1998, V87, P1249 CAPLUS
(24) Vold, R; J Biomol NMR 1997, V9, P329 CAPLUS
(25) Wang, C; J Virol 1993, V67, P5585 CAPLUS
(26) Wu, D; J Magn Reson A 1995, V115, P260 CAPLUS

REFERENCE 5

ACCESSION NUMBER: 141:310226 CA
TITLE: Papanicolau staining process
INVENTOR(S): Lapen, Daniel; Soule, Norman; Lim, Somthouck
PATENT ASSIGNEE(S): Cytyc Corporation, USA
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English

INT. PATENT CLASSIF.:
MAIN: G01N001-30
SECONDARY: G01N033-48
US PATENT CLASSIF.: 435040500
CLASSIFICATION: 9-4 (Biochemical Methods)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004191854	A1	20040930	US 2003-404879	20030331
WO 2004086945	A2	20041014	WO 2004-US9437	20040326

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-404879 20030331
ABSTRACT:
A method for treating a biol. sample with a Papanicolaou staining process is provided. The method comprises incorporating a detergent treatment into the staining process at any of various steps. The method has been found to advantageously reduce the number of artifacts produced during Papanicolaou staining. Also provided is a sample stained by such a process.

SUPPL. TERM: papanicolau staining process
INDEX TERM: Amines, biological studies
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(C12-14-alkyl, ethoxylated; papanicolau staining process)
INDEX TERM: Diagnosis
(agents; papanicolau staining process)
INDEX TERM: Detergents
(anionic; papanicolau staining process)
INDEX TERM: Analysis
Process automation
(automated anal.; papanicolau staining process)
INDEX TERM: Detergents
(cationic; papanicolau staining process)
INDEX TERM: Castor oil
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(ethoxylated; papanicolau staining process)
INDEX TERM: Human
Staining, biological
(papanicolau staining process)
INDEX TERM: Polyoxyalkylenes, biological studies
Saponins
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(papanicolau staining process)
INDEX TERM: Amines, biological studies
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(tallow alkyl, ethoxylated; papanicolau staining process)
INDEX TERM: 57-09-0, Hexadecyltrimethylammonium bromide 81-23-2, Dehydrocholic acid 81-25-4, Cholic acid 82-94-0, Light

Green 83-44-3, Deoxycholic acid 97-78-9, N-Lauroylsarcosine 112-92-5, 1-Octadecanol 122-18-9, Benzyldimethylhexadecylammonium chloride 123-46-6 124-03-8, Ethylhexadecyldimethylammonium bromide 126-92-1, Sodium octyl sulfate 128-13-2, Ursodeoxycholic acid 139-08-2, Benzyldimethyltetradecylammonium chloride 139-88-8, Niaproof 4 143-62-4, Digitoxigenin 145-42-6, Sodium taurocholate 151-21-3, Sodium dodecyl sulfate, biological studies 302-95-4, Sodium deoxycholate 360-65-6, Glycodeoxycholic acid 361-09-1, Sodium cholate 474-25-9, Chenodeoxycholic acid 474-74-8, Glycolithocholic acid 475-31-0, Glycocholic acid 516-90-5, Taurolithocholic acid 517-28-2, Hematoxylin 553-08-2, Thonzonium bromide 577-11-7, Triton GR-5 1119-94-4, Dodecyltrimethylammonium bromide 1119-97-7, Trimethyl(tetradecyl)ammonium bromide 1338-39-2, Span 20 1338-41-6, Span 60 1338-43-8, Span 80 1643-20-5, N,N-Dimethyldodecylamine N-oxide 2044-56-6, Lithium dodecyl sulfate 2281-11-0 2420-29-3, Hexaethylene glycol monooctadecyl ether 3055-94-5, Triethylene glycol monododecyl ether 3055-95-6, Pentaethylene glycol monododecyl ether 3055-96-7, Hexaethylene glycol monododecyl ether 3055-98-9, Octaethylene glycol monododecyl ether 3055-99-0, Nonaethylene glycol monododecyl ether 3700-67-2, Dimethyldioctadecylammonium bromide 3944-72-7, 1-Octanesulfonic acid 4478-97-1, Pentaethylene glycol monohexadecyl ether 4484-59-7, Triethylene glycol monohexadecyl ether 4669-23-2, Triethylene glycol monodecyl ether 5157-04-0, Hexaethylene glycol monotetradecyl ether 5168-91-2, Hexaethylene glycol monohexadecyl ether 5274-68-0, Tetraethylene glycol monododecyl ether 5698-39-5, Octaethylene glycol monohexadecyl ether 5703-94-6, Tetraethylene glycol monodecyl ether 6009-98-9, Sodium taurochenodeoxycholate 7281-04-1, Benzyldodecyldimethylammonium bromide 9002-92-0, Brij 30 9002-93-1, Triton X-100 9003-11-6 9004-95-9, Brij 52 9004-98-2, Brij 97 9004-99-3, Polyoxyethylene stearate 9005-00-9, Brij 78 9005-64-5, TWEEN 21 9005-65-6, TWEEN 80 9005-66-7, TWEEN 40 9005-67-8, TWEEN 61 9005-70-3, TWEEN 85 9005-71-4, TWEEN 65 9014-93-1, Triton X-207 9016-45-9, Triton N 9036-19-5, Igepal CA-520 9043-30-5 11024-24-1, Digitonin 11105-10-5, Triton QS 15 12298-68-9, Potassium iodide (K(I3)) 12777-77-4, Fast Green 13149-87-6 13177-41-8 14605-22-2, Tauroursodeoxycholic acid 14933-08-5, 3-(Dodecyldimethyl ammonio)propanesulfonate 14933-09-6 15163-36-7 15178-76-4 16023-35-1, 1-Propanesulfonic acid ion (-1) 16564-43-5, Sodium glycochenodeoxycholate 17372-87-1, Eosin Y 18449-82-6, Tetradecyl-β-D-maltoside 19327-38-9, Triethylene glycol monooctyl ether 19327-40-3, Pentaethylene glycol monooctyl ether 23244-49-7, Pentaethylene glycol monodecyl ether 24233-81-6, Octaethylene glycol monodecyl ether 24613-77-2, 1-Butanesulfonate 24613-78-3, Hexanesulfonate 24708-25-6, Pentanesulfonate 24708-26-7, 1-Heptanesulfonic acid ion(-1) 24938-91-8, Polyoxyethylene tridecyl ether 25301-02-4, Tyloxapol 25322-68-3D, Polyethylene glycol, derivs. 26266-57-9, Span 40 26266-58-0, Span 85 26403-72-5, Polyethylene glycol diglycidyl ether 26658-19-5, Span 65 26826-30-2, Triethylene glycol monotetradecyl ether 27847-86-5, Octaethylene glycol monotetradecyl ether 29781-81-5, n-Decyl α-D-glucopyranoside 29836-26-8, Octyl-β-D-

glucopyranoside 37211-53-3, Triton CF 21 37211-54-4, Triton CF 32 37281-47-3, Triton DF-12 38411-85-7, Sodium taurohyodeoxycholate 38480-64-7, 1-Dodecanesulfonic acid, ion(-1) 39034-24-7, Tetraethylene glycol monotetradecyl ether 39840-09-0, Heptaethylene glycol monodecyl ether 40036-79-1, Heptaethylene glycol monotetradecyl ether 45102-30-5, 1-Nonanesulfonic acid ion (-1) 45131-92-8, 1-Decanesulfonate 50996-85-5 52623-95-7, Triton QS-44 55348-40-8, Triton X-200 58229-81-5, Triton DF-16 59122-55-3 59979-06-5, Triton X-151 68207-00-1, Dodecylethyldimethylammonium bromide 69227-93-6, n-Dodecyl β-D-maltoside 69364-63-2, Polyoxyethylene isohexadecyl ether 70005-86-6, Undecyl β-D-glucopyranoside 70699-07-9 71093-13-5, Pentaethylene glycol monooctadecyl ether 75621-03-3, CHAPS 75718-57-9, Niaproof 82473-24-3, CHAPSO 82494-09-5, Decyl β-D-maltopyranoside 85182-91-8, 2-Bromoethanesulfonate 85261-19-4 85261-20-7, MEGA 10 85316-98-9, MEGA 8 86303-22-2, BigCHAP 86674-95-5, Pentaethylene glycol monohexyl ether 87246-72-8 98060-40-3 98064-96-1 115457-83-5 116183-64-3, Dodecyl α-D-maltoside 121309-88-4, Benzyltrimethylammonium tetrachloroiodate
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(papanicolau staining process)

REFERENCE 6

ACCESSION NUMBER: 141:238713 CA
TITLE: Purification and Characterization of the Human γ-Secretase Complex
AUTHOR(S): Fraering, Patrick C.; Ye, Wenjuan; Strub, Jean-Marc; Dolios, Georgia; LaVoie, Matthew J.; Ostaszewski, Beth L.; van Dorsselaer, Alain; Wang, Rong; Selkoe, Dennis J.; Wolfe, Michael S.
CORPORATE SOURCE: Center for Neurologic Diseases, Brigham and Women's Hospital and Harvard Medical School, Boston, MA, 02115, USA
SOURCE: Biochemistry (2004), 43(30), 9774-9789
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 7-3 (Enzymes)
Section cross-reference(s): 6, 13

ABSTRACT:
γ-Secretase is a member of an unusual class of proteases with intramembrane catalytic sites. This enzyme cleaves many type I membrane proteins, including the amyloid β-protein (Aβ) precursor (APP) and the Notch receptor. Biochem. and genetic studies have identified four membrane proteins as components of γ-secretase: heterodimeric presenilin (PS) composed of its N- and C-terminal fragments (PS-NTF/CTF), a mature glycosylated form of nicastrin (NCT), Aph-1, and Pen-2. Recent data from studies in Drosophila, mammalian, and yeast cells suggest that PS, NCT, Aph-1, and Pen-2 are necessary and sufficient to reconstitute γ-secretase activity. However, many unresolved issues, in particular the possibility of other structural or regulatory components, would be resolved by actually purifying the enzyme. Here, we report a detailed, multistep purification procedure for active γ-secretase and an initial characterization of the purified protease. Extensive mass spectrometry of the purified proteins strongly suggests that PS-NTF/CTF, mNCT, Aph-1, and Pen-2 are the components of active γ-secretase. Using the purified γ-secretase, we describe factors

that modulate the production of specific Aβ species: (1) phosphatidylcholine and sphingomyelin dramatically improve activity without changing cleavage specificity within an APP substrate; (2) increasing CHAPSO concns. from 0.1 to 0.25% yields a .apprx.100% increase in Aβ42 production; (3) exposure of an APP-based recombinant substrate to 0.5% SDS modulates cleavage specificity from a disease-mimicking pattern (high Aβ42/43) to a physiol. pattern (high Aβ40); and (4) sulindac sulfide directly and preferentially decreases Aβ42 cleavage within the purified complex. Taken together, our results define a procedure for purifying active γ-secretase and suggest that the lipid-mediated conformation of both enzyme and substrate regulate the production of the potentially neurotoxic Aβ42 and Aβ43 peptides.

SUPPL. TERM: gamma secretase human nicastrin presenilin Aph1 Pen2; amyloid beta protein precursor

INDEX TERM: Enzyme functional sites
(active; γ-secretase is composed of presenilin, glycosylated form of nicastrin, Aph-1 and Pen-2 membrane proteins)

INDEX TERM: Human
(lipid-mediated conformation of both γ-secretase and amyloid β-protein precursor regulate production of potentially neurotoxic amyloid β-protein precursor peptides)

INDEX TERM: Amyloid precursor proteins
Phosphatidylcholines, biological studies
Sphingomyelins
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(lipid-mediated conformation of both γ-secretase and amyloid β-protein precursor regulate production of potentially neurotoxic amyloid β-protein precursor peptides)

INDEX TERM: Proteins
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(membrane, Aph-1; γ-secretase is composed of presenilin, glycosylated form of nicastrin, Aph-1 and Pen-2 membrane proteins)

INDEX TERM: Proteins
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(membrane, Pen-2; γ-secretase is composed of presenilin, glycosylated form of nicastrin, Aph-1 and Pen-2 membrane proteins)

INDEX TERM: Proteins
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(nicastrin; γ-secretase is composed of presenilin, glycosylated form of nicastrin, Aph-1 and Pen-2 membrane proteins)

INDEX TERM: Conformation
(protein; CHAPSO and sodium dodecyl sulfate promotes amyloid β-protein precursor cleavage)

INDEX TERM: Protein motifs
(transmembrane domain; CHAPSO and sodium dodecyl sulfate promotes amyloid β-protein precursor transmembrane domain cleavage)

INDEX TERM: Presenilins
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(γ-secretase is composed of presenilin, glycosylated form of nicastrin, Aph-1 and Pen-2 membrane proteins)

INDEX TERM: 151-21-3, Sodium dodecyl sulphate, biological studies
82473-24-3, CHAPSO
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(CHAPSO and sodium dodecyl sulfate promotes amyloid β-protein precursor cleavage)

INDEX TERM: 749376-90-7 749376-91-8
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(lipid-mediated conformation of both γ-secretase and amyloid β-protein precursor regulate production of potentially neurotoxic amyloid β-protein precursor peptides)

INDEX TERM: 338454-52-7, γ-Secretase
ROLE: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(γ-secretase is composed of presenilin, glycosylated form of nicastrin, Aph-1 and Pen-2 membrane proteins)

REFERENCE COUNT: 70 THERE ARE 70 CITED REFERENCES AVAILABLE FOR THIS RECORD.

(1) Asami-Odaka, A; Biochemistry 1995, V34, P10272 CAPLUS
(2) Borchelt, D; Neuron 1996, V17, P1005 CAPLUS
(3) Burns, M; J Neurosci 2003, V23, P5645 CAPLUS
(4) Capell, A; J Biol Chem 1998, V273, P3205 CAPLUS
(5) Citron, M; Nat Med 1997, V3, P67 CAPLUS
(6) de Strooper, B; Nature 1998, V391, P387 CAPLUS
(7) de Strooper, B; Nature 1999, V398, P518 CAPLUS
(8) Dovey, H; J Neurochem 2001, V76, P173 CAPLUS
(9) Duff, K; Nature 1996, V383, P710 CAPLUS
(10) Edbauer, D; Nat Cell Biol 2003, V5, P486 CAPLUS
(11) Edbauer, D; Proc Natl Acad Sci U S A 2002, V99, P8666 CAPLUS
(12) Esler, W; Proc Natl Acad Sci U S A 2002, V99, P2720 CAPLUS
(13) Farmery, M; J Biol Chem 2003, V278, P24277 CAPLUS
(14) Fassbender, K; Proc Natl Acad Sci U S A 2001, V98, P5856 CAPLUS
(15) Fraering, P; Biochemistry 2004, V43, P323 CAPLUS
(16) Fraering, P; Mol Biol Cell 2001, V12, P3295 CAPLUS
(17) Francis, R; Dev Cell 2002, V3, P85 CAPLUS
(18) Fujiki, Y; J Cell Biol 1982, V93, P97 CAPLUS
(19) Hartmann, H; J Biol Chem 1997, V272, P14505 CAPLUS
(20) Holmes-McNary, M; Brain Res Dev Brain Res 1997, V101, P9 CAPLUS
(21) Kim, D; J Biol Chem 2002, V277, P49976 CAPLUS
(22) Kim, J; J Mol Biol 2001, V308, P409 CAPLUS
(23) Kim, T; Science 1997, V277, P373 CAPLUS
(24) Kimberly, W; Biochemistry 2003, V42, P137 CAPLUS
(25) Kimberly, W; J Biol Chem 2002, V277, P35113 CAPLUS
(26) Kimberly, W; Proc Natl Acad Sci U S A 2003, V100, P6382 CAPLUS
(27) Klafki, H; J Biol Chem 1996, V271, P28655 CAPLUS
(28) Lammich, S; J Biol Chem 2002, V277, P44754 CAPLUS
(29) Lavoie, M; J Biol Chem 2003, V278, P34427 CAPLUS
(30) Lavoie, M; J Biol Chem 2003, V278, P37213 CAPLUS
(31) Leem, J; J Biol Chem 2002, V277, P19236 CAPLUS
(32) Li, Y; Proc Natl Acad Sci U S A 2000, V97, P6138 CAPLUS
(33) Lichtenthaler, S; Proc Natl Acad Sci U S A 2002, V99, P1365 CAPLUS
(34) Mammi, S; Biochemistry 1990, V29, P5265 CAPLUS
(35) Marambaud, P; EMBO J 2001, V21, P1948
(36) May, P; J Biol Chem 2002, V277, P18736 CAPLUS

(37) Murphy, M; Biochim Biophys Acta 2002, V1586, P199 CAPLUS
(38) Ni, C; Science 2001, V294, P2179 CAPLUS
(39) Nitsch, R; Proc Natl Acad Sci U S A 1992, V89, P1671 CAPLUS
(40) Nyabi, O; J Biol Chem 2003, V278, P43430 CAPLUS
(41) Otzen, D; J Mol Biol 2003, V330, P641 CAPLUS
(42) Richardson, D; Biochim Biophys Acta 1997, V1331, P1 CAPLUS
(43) Rizo, J; Biochemistry 1993, V32, P4881 CAPLUS
(44) Runz, H; J Neurosci 2002, V22, P1679 CAPLUS
(45) Sahara, N; FEBS Lett 1996, V381, P7 CAPLUS
(46) Scheuner, D; Nat Med 1996, V2, P864 CAPLUS
(47) Selkoe, D; Physiol Rev 2001, V81, P741 CAPLUS
(48) Simons, M; Proc Natl Acad Sci U S A 1998, V95, P6460 CAPLUS
(49) Struhl, G; Nature 1999, V398, P522 CAPLUS
(50) Suomensaari, S; Soc Neurosci Abstr 2000, V26, P1283
(51) Suzuki, N; Science 1994, V264, P1336 CAPLUS
(52) Takahashi, Y; J Biol Chem 2003, V278, P18664 CAPLUS
(53) Takasugi, N; J Biol Chem 2002, V277, P50198 CAPLUS
(54) Takasugi, N; Nature 2003, V422, P438 CAPLUS
(55) Tian, G; J Biol Chem 2002, V277, P31499 CAPLUS
(56) Vassar, R; Neuron 2000, V27, P419 CAPLUS
(57) Wahrle, S; Neurobiol Dis 2002, V9, P11 CAPLUS
(58) Wang, R; J Biol Chem 1996, V271, P31894 CAPLUS
(59) Watanabe, Y; J Protein Chem 2002, V21, P169 CAPLUS
(60) Weggen, S; Nature 2001, V414, P212 CAPLUS
(61) Wolfe, M; Biochemistry 1999, V38, P11223 CAPLUS
(62) Wolfe, M; Biochemistry 1999, V38, P4720 CAPLUS
(63) Wolfe, M; Nat Rev Drug Discov 2002, V1, P859 CAPLUS
(64) Wolfe, M; Nature 1999, V398, P513 CAPLUS
(65) Wolfe, M; Science 2002, V296, P2156 CAPLUS
(66) Xia, W; Biochemistry 1998, V37, P16465 CAPLUS
(67) Xia, W; Proc Natl Acad Sci U S A 1997, V94, P8208 CAPLUS
(68) Yang, D; J Biol Chem 2002, V277, P28135 CAPLUS
(69) Ye, Y; Nature 1999, V398, P525 CAPLUS
(70) Yu, G; J Biol Chem 1998, V273, P16470 CAPLUS

REFERENCE 7

ACCESSION NUMBER: 141:152866 CA
TITLE: Effect of Membrane Perturbants on the Activity and Phase Distribution of Inositol Phosphorylceramide Synthase; Development of a Novel Assay
AUTHOR(S): Aeed, Paul A.; Sperry, Andrea E.; Young, Casey L.; Nagiec, Marek M.; Elhammer, Ake P.
CORPORATE SOURCE: Pharmacia Corporation, Kalamazoo, MI, 49001, USA
SOURCE: Biochemistry (2004), 43(26), 8483-8493
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 7-1 (Enzymes)
ABSTRACT:
The effect of 26 different membrane-perturbing agents on the activity and phase distribution of inositol phosphorylceramide synthase (IPC synthase) activity in crude Candida albicans membranes was investigated. The nonionic detergents Triton X-100, Nonidet P-40, Brij, Tween, and octylglucoside all inactivated the enzyme. However, at moderate concns., the activity of the Triton X-100- and octylglucoside-solubilized material could be partially restored by inclusion of 5 mM phosphatidylinositol (PI) in the solubilization buffer. The apparent mol.

mass of IPC synthase activity solubilized in 2% Triton X-100 was between 1.5 + 106 and 20 + 106 Da, while under identical conditions, octylglucoside-solubilized activity remained associated with large presumably membrane-like structures. Increased detergent concns. produced more drastic losses of enzymic activity. The zwitterionic detergents Empigen BB, N-dodecyl-N,N-(dimethylammonio)butyrate (DDMAB), Zwittergent 3-10, and amidosulfobetaine (ASB)-16 all appeared capable of solubilizing IPC synthase. However, these agents also inactivated the enzyme essentially irreversibly. Solubilization with lysophospholipids again resulted in drastic losses of enzymic activity that were not restored by the inclusion of PI. Lysophosphatidylinositol also appeared to compete, to some extent, with the donor substrate phosphatidylinositol. The sterol-containing agent digitonin completely inactivated IPC synthase. By contrast, sterol-based detergents such as 3-[(3-cholamidopropyl)dimethylammonio]-1-propanesulfonate (CHAPS), 3-[(3-cholamidopropyl)dimethylammonio]-2-hydroxy-1-propanesulfonate (CHAPSO), and taurodeoxycholate (tDOC) had little or no effect on the enzyme activity. The IPC synthase activity in C. Albicans membranes remained largely intact and sedimentable at CHAPS concns. (4%) where >90% of the phospholipids and 60% of the total proteins were extracted from the membranes. At 2.5% CHAPS, a concentration
where .apprx.50% of the protein and 80% of the phospholipids are solubilized, there was no detectable loss of enzyme activity, and the detergent-treated membranes had significantly improved properties compared to crude, untreated membranes as the source of IPC synthase activity. In contrast to assays utilizing intact membranes or Triton X-100 exts., assays using CHAPS- or tDOC-washed membranes were found to be reproducible, completely dependent on added acceptor substrate (C6-7-nitro-2-1,3-benzoxadiazol-4-yl (NBD)-ceramide), and >95% dependent on added donor substrate (PI). Product formation was linear with respect to both enzyme concentration and time, and transfer efficiency was improved more than 20-fold as compared to assays using crude membranes. Determination
of kinetic parameters for the two IPC synthase substrates using CHAPS-washed membranes resulted in Km values of 3.3 and 138.0 μM for C6-NBD-ceramide and PI, resp. In addition, the donor substrate, PI, was found to be inhibitory at high concns. with an apparent Ki of 588.2 μM.

SUPPL. TERM: inositol phosphorylceramide synthase membrane perturbant phase

INDEX TERM: Betaines
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(C12-14-alkyldimethyl, membrane perturbant; membrane perturbants effects on activity and phase distribution of inositol phosphorylceramide synthase in relation to enzyme assay)

INDEX TERM: Lysophosphatides
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(lysophosphatidylglycerols, membrane perturbant; membrane perturbants effects on activity and phase distribution of inositol phosphorylceramide synthase in relation to enzyme assay)

INDEX TERM: Lysophosphatidylcholines
Lysophosphatidylethanolamines
Lysophosphatidylinositols
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(membrane perturbant; membrane perturbants effects on activity and phase distribution of inositol phosphorylceramide synthase in relation to enzyme assay)

INDEX TERM: Candida albicans
Enzyme kinetics
Membrane, biological

Membrane phases, biological
Solubilization
(membrane perturbants effects on activity and phase distribution of inositol phosphorylceramide synthase in relation to enzyme assay)

INDEX TERM: 112-80-1, Oleic acid, biological studies 151-21-3, SDS, biological studies 516-50-7 9002-92-0, Brij 35 9002-93-1, Triton X-100 9004-95-9, Brij 58 9005-64-5, Tween 20 9005-65-6, Tween 80 9016-45-9, Triton N-60 9036-19-5, Nonidet P-40 11024-24-1, Digitonin 15163-30-1, DDMAB 15163-36-7, Zwittergent 3-10 29836-26-8, Octylglucoside 52562-29-5, ASB 16 69227-93-6 75621-03-3, CHAPS 82473-24-3, CHAPSO 85618-21-9 148565-56-4 228579-27-9

ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(membrane perturbant; membrane perturbants effects on activity and phase distribution of inositol phosphorylceramide synthase in relation to enzyme assay)

INDEX TERM: 157482-45-6, Inositol phosphorylceramide synthase

ROLE: ANT (Analyte); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(membrane perturbants effects on activity and phase distribution of inositol phosphorylceramide synthase in relation to enzyme assay)

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD.

(1) Bagnat, M; Mol Biol Cell 2001, V12, P4129 CAPLUS
(2) Bagnat, M; Proc Natl Acad Sci U S A 2000, V97, P3254 CAPLUS
(3) Bligh, E; Can J Biochem Physiol 1959, V37, P911 CAPLUS
(4) Brown, D; J Biol Chem 2000, V275, P17221 CAPLUS
(5) Dickson, R; Annu Rev Biochem 1998, V67, P27 CAPLUS
(6) Dickson, R; Biochim Biophys Acta 1999, V1426, P347 CAPLUS
(7) Dotson, S; Arch Biochem Biophys 1995, V316, P773 CAPLUS
(8) Fischl, A; Methods Enzymol 1999, V311, P123
(9) Fonzi, W; J Bacteriol 1999, V181, P7070 CAPLUS
(10) Frost, D; FEMS Microbiol Lett 1997, V146, P255 CAPLUS
(11) Hartmann, A; Mol Biol Cell 1999, V10, P3909 CAPLUS
(12) Hechtberger, P; Eur J Biochem 1994, V225, P641 CAPLUS
(13) Hendershot, L; Anal Biochem 2002, V307, P273 CAPLUS
(14) Hitchcock, C; J Gen Microbiol 1986, V132, P2421 CAPLUS
(15) Hitchcock, C; J Gen Microbiol 1989, V135, P1949 CAPLUS
(16) Huang, P; Anal Biochem 1998, V259, P89 CAPLUS
(17) Inoue, S; Eur J Biochem 1995, V231, P845 CAPLUS
(18) Kern, R; Biochem Biophys Res Commun 2001, V289, P1268 CAPLUS
(19) Ko, J; J Food Biochem 1995, V19, P253
(20) Kurome, T; Curr Opin Anti-Infect Invest Drugs 2000, V2, P375 CAPLUS
(21) Lavie, Y; J Biol Chem 1996, V271, P19530 CAPLUS
(22) Leber, A; FEBS Lett 1995, V337, P271
(23) Lester, R; Adv Lipid Res 1993, V26, P253 CAPLUS
(24) Levine, T; Mol Biol Cell 2000, V11, P2267 CAPLUS
(25) Lowry, O; J Biol Chem 1951, V193, P265 CAPLUS
(26) Mandala, S; J Biol Chem 1997, V272, P32709 CAPLUS
(27) Mandala, S; J Biol Chem 1998, V273, P14942 CAPLUS
(28) Mao, Q; Biochim Biophys Acta 1997, V1327, P107 CAPLUS
(29) Mol, P; J Biol Chem 1994, V269, P31267 CAPLUS
(30) Nagai, A; Biochem, Biophys Res Commun 1995, V211, P960

CAPLUS
(31) Nagiec, M; J Biol Chem 1997, V272, P9809 CAPLUS
(32) Patton, J; J Bacteriol 1991, V173, P3101 CAPLUS
(33) Poetsch, A; J Biol Chem 2001, V276, P48009 CAPLUS
(34) Schneiter, R; BioEssays 1999, V21, P1004 MEDLINE
(35) Segel, I; Enzyme Kinetics:Behavior and Analysis of Rapid Equilibrium and Steady-State Enzyme Systems 1975
(36) Simons, K; Nature 1997, V387, P569 CAPLUS
(37) Smith, S; J Biol Chem 1974, V249, P3395 CAPLUS
(38) Strahl-Bolsinger, S; Eur J Biochem 1991, V196, P185 CAPLUS
(39) Strahl-Bolsinger, S; J Biol Chem 1999, V274, P9068 CAPLUS
(40) Valterson, C; J Lipid Res 1982, V23, P868
(41) Vincent, V; Microbiology 1995, V141, P1829 CAPLUS
(42) Warnecke, D; Cell Mol Life Sci 2003, V60, P919 CAPLUS
(43) Wells, G; J Bacteriol 1996, V178, P6223 MEDLINE
(44) Wessel, D; Anal Biochem 1984, V138, P141 CAPLUS
(45) Zhong, W; FEBS Lett 1999, V463, P241 CAPLUS

REFERENCE 8

ACCESSION NUMBER: 141:119301 CA
TITLE: Improving the accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents
INVENTOR(S): Hawkins, Erika; Cali, James J.; Ho, Samuel Kin Sang; O'Brien, Martha; Somberg, Richard; Bulleit, Robert F.; Wood, Keith V.
PATENT ASSIGNEE(S): Promega Corporation, USA
SOURCE: PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: G01N
CLASSIFICATION: 7-1 (Enzymes)
Section cross-reference(s): 9
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004059294	A2	20040715	WO 2003-US41454	20031223
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2005026171	A1	20050203	US 2003-746995	20031223
PRIORITY APPLN. INFO.:			US 2002-436173P	20021223
			US 2003-444264P	20030131
			US 2003-447334P	20030213

ABSTRACT:
The invention concerns methods and kits for improving the accuracy of luciferase-based assays for high throughput screening of compound libraries by reducing the number of false hits. A method and kit is provided for enhancing the tolerance of an assay reagent to compds. in an assay sample, the assay reagent

including a luciferase enzyme. The method includes contacting the luciferase with a tolerance enhancement agent in an amount sufficient to substantially protect luciferase enzyme activity from interference of the compound and minimize interference by at least about 10% relative to an assay not having tolerance enhancement agent. Tolerance-enhancing effect of detergents on the inhibition of luciferase was studied. Minimization of false hit occurrence using tolerance enhancement agents such as detergents was demonstrated.

SUPPL. TERM: luciferase assay tolerance enhancement agent detergent false hit screening

INDEX TERM: Surfactants
(anionic, tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: Surfactants
(cationic, tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: Castor oil
ROLE: ARU (Analytical role, unclassified); ANST (Analytical study)
(ethoxylated, tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: High throughput screening
Luminescence, bioluminescence
Luminescence spectroscopy
Test kits
(improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: Polyoxyalkylenes, analysis
ROLE: ARU (Analytical role, unclassified); ANST (Analytical study)
(improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: Enzymes, biological studies
ROLE: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(non-luminogenic; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: Surfactants
(nonionic, tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: Amino acids, uses
Peptides, uses
ROLE: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(reaction products, with aminoluciferin; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: Surfactants
(tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: Crown ethers
Polyoxyalkylenes, analysis
ROLE: ARU (Analytical role, unclassified); ANST (Analytical study)
(tolerance enhancement agent; improving accuracy of

luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: Surfactants
(zwitterionic, tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: 9016-45-9, Triton N101
ROLE: ARU (Analytical role, unclassified); ANST (Analytical study)
(Tergitol NP 9, tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: 9001-92-7, Protease
ROLE: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Trypsinase; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: 9002-07-7, Trypsin 9013-05-2, Phosphatase 9031-44-1, Kinase 9035-51-2, Cytochrome P450, biological studies 169592-56-7, Caspase-3 179241-78-2, Caspase-8 180189-96-2, Caspase-9 186322-81-6, Caspase 189258-14-8, Caspase-7 372092-80-3, Protein kinase
ROLE: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: 56-65-5, 5'-ATP, uses 58-64-0, 5'-ADP, uses 9014-00-0, Luciferase 61869-41-8, Renilla luciferase 61970-00-1, Firefly luciferase
ROLE: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: 2591-17-5D, D-Luciferin, derivs. 5571-98-2D, reaction products with amino acids or peptides
ROLE: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(luminogenic substrate; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: 57-09-0, CTAB 83-44-3 9002-92-0, Brij 35 9002-93-1, Triton X-100 9003-39-8, Polyvinyl pyrrolidone 9003-47-8, Polyvinyl pyridine 9004-95-9, Brij 58 9014-85-1 10016-20-3, α-Cyclodextrin 12619-70-4, Cyclodextrin 25322-68-3, PEG 75621-03-3, Chaps 82473-24-3, Chapso 86303-22-2, Bigchap 106392-12-5, Pluronic L64 188309-93-5, Chemal LA-9 722509-19-5, Pierce C 08 722509-82-2, Pierce C 10
ROLE: ARU (Analytical role, unclassified); ANST (Analytical study)
(tolerance enhancement agent; improving accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: 723025-70-5 723025-71-6 723025-72-7 723025-73-8
ROLE: PRP (Properties)
(unclaimed nucleotide sequence; improving the accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

INDEX TERM: 723025-66-9 723025-67-0 723025-68-1 723025-69-2
ROLE: PRP (Properties)

(unclaimed protein sequence; improving the accuracy of luciferase-based assays for high throughput screening by using tolerance enhancement agents)

REFERENCE 9

ACCESSION NUMBER: 141:50129 CA
TITLE: Assay for gamma secretase modulators
INVENTOR(S): Beher, Dirk
PATENT ASSIGNEE(S): Merck Sharp & Dohme Limited, UK
SOURCE: Brit. UK Pat. Appl., 30 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: C12Q001-37
SECONDARY: C12N009-64
CLASSIFICATION: 9-2 (Biochemical Methods)
Section cross-reference(s): 7, 14
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2396415	A1	20040623	GB 2003-28875	20031212
US 2004132114	A1	20040708	US 2003-739485	20031218
PRIORITY APPLN. INFO.:			GB 2002-29582	20021219

ABSTRACT:
An assay for identifying compds. that interact with the γ-secretase complex comprising preparing and solubilizing a source of the complex, incubating a test compound together with an affinity probe and the source, capturing the resulting bound complex, and analyzing the components of the complex to determine whether the test compound has interacted with the complex by determining the amount of
PS1-NTF, PS1-CTF or mature nicastrin present in the complex. The assay may be used in the identification of components of the γ -secretase complex.

SUPPL. TERM: assay gamma secretase
INDEX TERM: Presenilins
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(1; assay for gamma secretase modulators)
INDEX TERM: Proteins
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(PEN-2, APH-1; assay for gamma secretase modulators)
INDEX TERM: Alzheimer's disease
(assay for gamma secretase modulators)
INDEX TERM: Nerve, neoplasm
(neuroblastoma; assay for gamma secretase modulators)
INDEX TERM: Proteins
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(nicastrin; assay for gamma secretase modulators)
INDEX TERM: 82473-24-3, CHAPSO
ROLE: ARU (Analytical role, unclassified); ANST (Analytical study)
(assay for gamma secretase modulators)
INDEX TERM: 392658-40-1
ROLE: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); ANST (Analytical study); PROC (Process)
(assay for gamma secretase modulators)

INDEX TERM: 338454-52-7, γ-Secretase
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(assay for gamma secretase modulators)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD.
(1) Anon; WO 2001075435 A3 CAPLUS
(2) Anon; WO 2003008635 A3 CAPLUS
(3) Beher; Biochemistry 2003, V42, P8133 CAPLUS
(4) Kornilova; J Biol Chem 2003, V278, P16470 CAPLUS
(5) Pinnix; J Biol Chem 2001, V276, P481 CAPLUS
(6) Weihofen; J Biol Chem 2003, V278, P16528 CAPLUS

REFERENCE 10

ACCESSION NUMBER: 141:40332 CA
TITLE: Production of nano-carbon dissolving and purifying aqueous solutions
INVENTOR(S): Fuugetsu, Bunshi
PATENT ASSIGNEE(S): Hokkaido Technology Licensing Office Co., Ltd., Japan
SOURCE: PCT Int. Appl., 13 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: C01B031-02
CLASSIFICATION: 49-1 (Industrial Inorganic Chemicals)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004052782	A1	20040624	WO 2002-JP12815	20021206
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2004060798	A1	20040722	WO 2003-JP15445	20031202
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: WO 2002-JP12815 20021206
ABSTRACT:
The alkaline dissolving solution contains phospholipid- or non-phospholipid surfactants forming 50-300 nm of microspore, nano-carbon permeable substance of Li+, and a persulfate as an oxidizing agent. The surfactant is selected from ≥1 of distearoyl phosphatidylcholine, dimyristoyl phosphatidylcholine, dipalmitoyl phosphatidylcholine, 3-[(3-colamidepropyl)dimethylamino]-2-hydroxy-1-propane sulfonate, 3-[(3-colamidepropyl)dimethylamino]-1-propane sulfonate, and N,N-bis(3-D-gluconamidopropyl)deoxycholamide. Nano-carbon containing raw

material is added into the solution for purification

SUPPL. TERM: nanocarbon dissoln purifn surfactant oxidizing agent
INDEX TERM: Nanotubes
(carbon; production of nano-carbon dissolving and purifying aqueous solns.)
INDEX TERM: Peroxysulfates
ROLE: RGT (Reagent); RACT (Reactant or reagent)
(peroxydisulfates; production of nano-carbon dissolving and purifying aqueous solns.)
INDEX TERM: Surfactants
(phospholipid, non-phospholipid; production of nano-carbon dissolving and purifying aqueous solns.)
INDEX TERM: Oxidizing agents
(production of nano-carbon dissolving and purifying aqueous solns.)
INDEX TERM: 63-89-8, Dipalmitoyl phosphatidylcholine 816-94-4, Distearoyl phosphatidylcholine 18194-24-6, Dimyristoyl phosphatidylcholine 75621-03-3, 3-[(3-Cholamidopropyl)dimethylammonio]-1-propanesulfonate 82473-24-3, 3-[(3-Cholamidopropyl)dimethylammonio]-2-hydroxy-1-propanesulfonate 86303-23-3, N,N'-Bis(3-D-gluconamidopropyl)deoxycholamide
ROLE: MOA (Modifier or additive use); RGT (Reagent); RACT (Reactant or reagent); USES (Uses)
(production of nano-carbon dissolving and purifying aqueous solns.)

=>

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=> s cholan
L8        16541 CHOLAN

=> s l8 and dimethylamino propyl
          464759 DIMETHYLAMINO
         2158470 PROPYL
               4 PROPYLS
         2158470 PROPYL
                   (PROPYL OR PROPYLS)
           42929 DIMETHYLAMINO PROPYL
                   (DIMETHYLAMINO(W)PROPYL)
L9             2 L8 AND DIMETHYLAMINO PROPYL

=> s l9 and l1
L10            0 L9 AND L1

=> d iall l9 1-2

L9   ANSWER 1 OF 2  REGISTRY  COPYRIGHT 2005 ACS on STN
RN   204075-64-9  REGISTRY
ED   Entered STN:  14 Apr 1998
CN   Cholan-24-oic acid, 7,12-dihydroxy-3-[[6-[(1-oxo-2-
     propenyl)amino]hexyl]oxy]-, monosodium salt, (3α,5β,7α,12
     α)-, polymer with N-[3-(dimethylamino)propyl]-2-methyl-2-propenamide
     hydrochloride (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   2-Propenamide, N-[3-(dimethylamino)propyl]-2-methyl-, hydrochloride,
     polymer with (3α,5β,7α,12α)-7,12-dihydroxy-3-[[6-
     [(1-oxo-2-propenyl)amino]hexyl]oxy]cholan-24-oic acid monosodium salt
     (9CI)
FS   STEREOSEARCH
MF   (C33 H55 N O6 . C9 H18 N2 O . x Cl H . Na)x
CI   PMS
PCT  Polyacrylic, Polyester, Polyester formed
SR   CA
LC   STN Files:   CA, CAPLUS
DT.CA  CAplus document type:  Patent
RL.P   Roles from patents:  BIOL (Biological study); PREP (Preparation); USES
       (Uses)

Ring System Data

 Elemental | Elemental | Size of |Ring System|   Ring    |    RID
 Analysis  | Sequence  |the Rings|  Formula  |Identifier|Occurrence
    EA     |    ES     |   SZ    |    RF     |   RID    |  Count
===========+===========+=========+===========+==========+==========
C5-C6-C6-C6|C5-C6-C6-C6|5-6-6-6  |C17        |4432.3.1  | 1 in CM
           |           |         |           |          |2


     CM   1

     CRN  204075-63-8  (5205-93-6)
     CMF  C9 H18 N2 O . x Cl H
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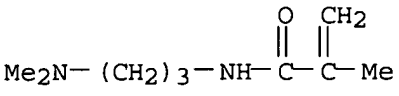
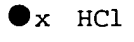
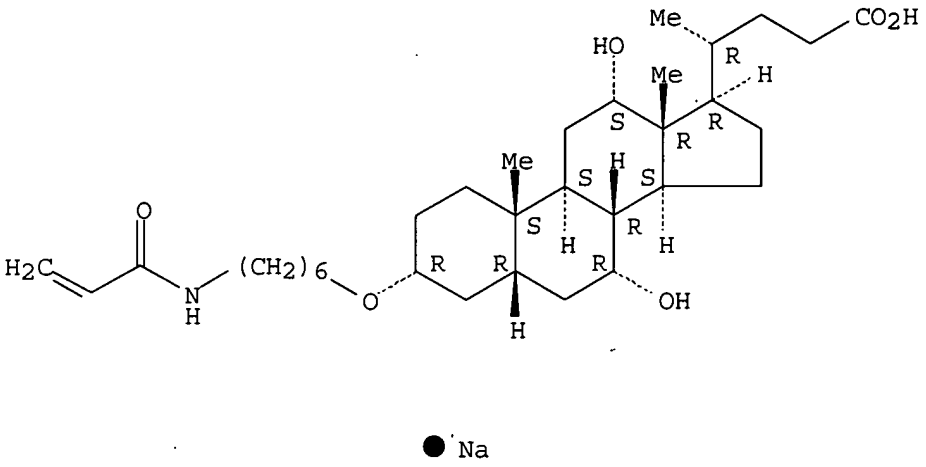




CM 2

CRN 204075-47-8 (212011-88-6)
CMF C33 H55 N O6 . Na

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

ACCESSION NUMBER:	128:201062 CA
TITLE:	Polymeric bile acid resorption inhibitors with simultaneous bile acid-adsorbing action
INVENTOR(S):	Von Seggern, Heinke; Kramer, Werner; Wess, Guenther
PATENT ASSIGNEE(S):	Hoechst Research & Technology Deutschland G.m.b.H. & Co. K.-G., Germany; Von Seggern, Heinke; Kramer, Werner; Wess, Guenther
SOURCE:	PCT Int. Appl., 63 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	German
INT. PATENT CLASSIF.:	
MAIN:	A61K047-48
CLASSIFICATION:	1-10 (Pharmacology) Section cross-reference(s): 35
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9807449	A2	19980226	WO 1997-EP4049	19970725
WO 9807449	A3	19980625		
W: CA, JP, MX, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19633268	A1	19980226	DE 1996-19633268	19960819
CA 2263671	AA	19980226	CA 1997-2263671	19970725
EP 918544	A2	19990602	EP 1997-940028	19970725
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2000517356	T2	20001226	JP 1998-510319	19970725
PRIORITY APPLN. INFO.:			DE 1996-19633268	19960819
			WO 1997-EP4049	19970725

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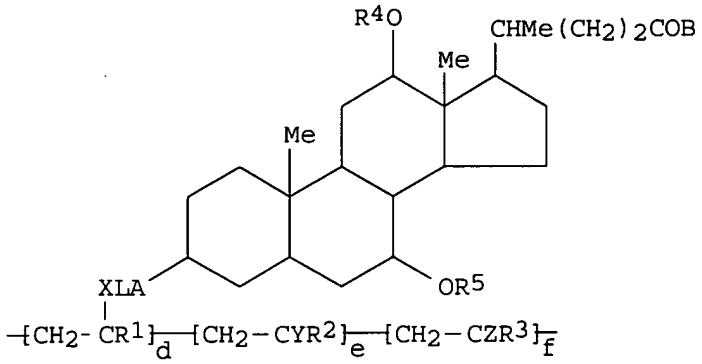


I

ABSTRACT:
Vinyl copolymers are disclosed which contain bile acid-adsorbing sites such as quaternary ammonium groups and are conjugated, directly or via a spacer, to a bile acid mol. or bile acid resorption inhibitor which binds to bile acid receptors. These polymers, of formula I [R1-R3 = H, CH3; R4, R5 = H, C1-6 alkyl or acyl; A = O, NH, bond; B = OH, ONa, OK, (substituted) amino; L = bond, NH, C(O), alkylene, Ar, N- or O-containing linker; Ar = arylene; X = bond, CH2, Ar, ArCH2; Y, Z = NH2, (substituted) amino or quaternary ammonium-containing group, CO2H, etc.; d = 0.01-1.00; e, f = 0-0.99; d + e + f = 1], cannot be resorbed owing to their high mol. weight, and prevent the accumulation of unresorbed bile acids in the intestine which could lead to diarrhea. I are suitable for treating lipid metabolism disturbances. Thus, cholic acid was converted to the 3-mesylate, then by substitution to the triethylene glycol ether, which was tosylated and conjugated to polyvinylamine with a degree of substitution of 1%. In an alternative procedure, Me 3-acryloylcholate was copolymd. with 3-methacrylamidopropyltrimethylammonium chloride using VA 044 as initiator, and the product was neutralized with NaOH. The addition product of Me 3-acryloylcholate to polyvinylamine adsorbed 52% of Na taurocholate and Na glycocholate from aqueous solution, compared to 33% for cholestyramine.

SUPPL. TERM: bile acid resorption inhibitor polymer conjugate; adsorption bile acid vinyl polymer

INDEX TERM: Bile acids
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(conjugates, with polymers; polymeric bile acid resorption inhibitors with simultaneous bile acid-adsorbing action)

INDEX TERM: Circulation
(enterohepatic; polymeric bile acid resorption inhibitors with simultaneous bile acid-adsorbing action)

INDEX TERM: Adsorption
Antiarteriosclerotics
Anticholesteremic agents
Detergents
Digestive tract
Hypolipemic agents
Intestine
Resorption, animal
(polymeric bile acid resorption inhibitors with simultaneous bile acid-adsorbing action)

INDEX TERM: Bile acids
ROLE: BPR (Biological process); BSU (Biological study,

unclassified); BIOL (Biological study); PROC (Process)
(polymeric bile acid resorption inhibitors with simultaneous bile acid-adsorbing action)

INDEX TERM: Vinyl compounds, biological studies
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polymers, conjugates with bile acid resorption inhibitors; polymeric bile acid resorption inhibitors with simultaneous bile acid-adsorbing action)

INDEX TERM: Lipids, biological studies
ROLE: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(resorption of; polymeric bile acid resorption inhibitors with simultaneous bile acid-adsorbing action)

INDEX TERM: Diet
(supplements; polymeric bile acid resorption inhibitors with simultaneous bile acid-adsorbing action)

INDEX TERM: 81-25-4DP, Cholic acid, conjugates with polymers
26336-38-9DP, Polyvinylamine, conjugates with bile acids
204075-40-1P 204075-46-7P 204075-48-9P 204075-59-2P
204075-61-6P 204075-64-9P 204075-68-3P 204075-70-7DP, saponified 204075-71-8DP, saponified 204075-92-3P
204075-95-6P 204075-98-9P 204076-00-6P 204076-02-8P
204076-03-9P
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polymeric bile acid resorption inhibitors with simultaneous bile acid-adsorbing action)

INDEX TERM: 81-24-3, Taurocholic acid 145-42-6, Sodium taurocholate
360-65-6, Glycodeoxycholic acid 475-31-0, Glycocholic acid
516-35-8, Taurochenodeoxycholic acid 516-50-7; Taurodeoxycholic acid 640-79-9, Glycochenodeoxycholic acid
863-57-0, Sodium glycocholate
ROLE: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(polymeric bile acid resorption inhibitors with simultaneous bile acid-adsorbing action)

INDEX TERM: 81-25-4, Cholic acid 100-02-7, p-Nitrophenol, reactions
109-85-3, 2-Methoxyethylamine 112-27-6 629-03-8, 1,6-Dibromohexane 4101-68-2, 1,10-Dibromodecane
5205-93-6 71550-12-4, Poly(allylamine hydrochloride)
204075-50-3
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(polymeric bile acid resorption inhibitors with simultaneous bile acid-adsorbing action)

INDEX TERM: 72090-85-8P 135053-65-5P 204075-37-6P 204075-38-7P
204075-41-2P 204075-42-3P 204075-43-4P 204075-44-5P
204075-49-0P 204075-54-7P 204075-56-9P 204075-69-4P
204076-04-0P
ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polymeric bile acid resorption inhibitors with simultaneous bile acid-adsorbing action)

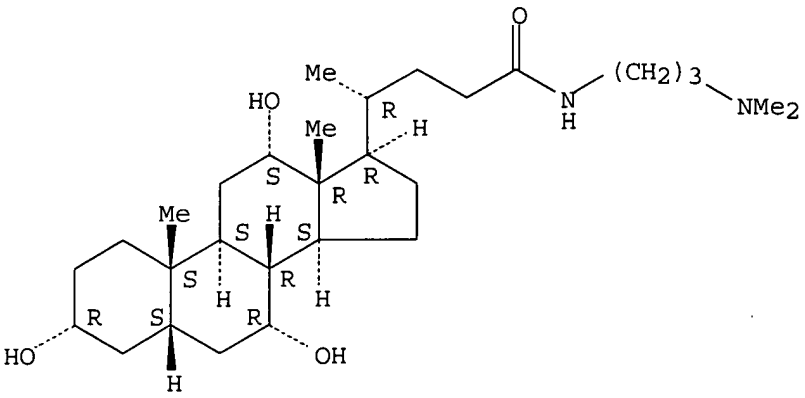
L9 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN
RN 76555-98-1 REGISTRY
ED Entered STN: 16 Nov 1984
CN **Cholan-24-amide, N-[3-(dimethylamino)propyl]-3,7,12-trihydroxy-, (3α,5β,7α,12α)- (9CI)** (CA INDEX NAME)

FS STEREOSEARCH
MF C29 H52 N2 O4
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
RLD.P Roles for non-specific derivatives from patents: USES (Uses)
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Ring System Data

Elemental Analysis EA	Elemental Sequence ES	Size of the Rings SZ	Ring System Formula RF	Ring Identifier RID	RID Occurrence Count
C5-C6-C6-C6	C5-C6-C6-C6	5-6-6-6	C17	4432.3.1	1

Absolute stereochemistry.



Predicted Properties (PPROP)

PROPERTY (CODE)	VALUE	CONDITION	NOTE
Bioconc. Factor (BCF)	1	pH 1	(1) ACD
Bioconc. Factor (BCF)	1	pH 4	(1) ACD
Bioconc. Factor (BCF)	1	pH 7	(1) ACD
Bioconc. Factor (BCF)	1.00	pH 8	(1) ACD
Bioconc. Factor (BCF)	22.4	pH 10	(1) ACD
Boiling Point (BP)	658.6+/-55.0 deg C	760.0 Torr	(1) ACD
Enthalpy of Vap. (HVAP)	110.99+/-6.0 kJ/mol		(1) ACD
Flash Point (FP)	352.1+/-56.7 deg C		(1) ACD
H acceptors (HAC)	6		(1) ACD
H donors (HD)	4		(1) ACD
Koc (KOC)	1	pH 1	(1) ACD
Koc (KOC)	1	pH 4	(1) ACD
Koc (KOC)	1.66	pH 7	(1) ACD
Koc (KOC)	13.5	pH 8	(1) ACD
Koc (KOC)	300	pH 10	(1) ACD
logD (LOGD)	-0.88	pH 1	(1) ACD
logD (LOGD)	-0.88	pH 4	(1) ACD

logD (LOGD)	-0.14	pH 7	(1) ACD
logD (LOGD)	0.77	pH 8	(1) ACD
logD (LOGD)	2.11	pH 10	(1) ACD
logP (LOGP)	2.221+/-0.427		(1) ACD
Molar Solubility (SLB.MOL)	>=0.01 - <0.1 mol/L	pH 1	(1) ACD
Molar Solubility (SLB.MOL)	>=0.01 - <0.1 mol/L	pH 4	(1) ACD
Molar Solubility (SLB.MOL)	<0.01 mol/L	pH 7	(1) ACD
Molar Solubility (SLB.MOL)	<0.01 mol/L	pH 8	(1) ACD
Molar Solubility (SLB.MOL)	<0.01 mol/L	pH 10	(1) ACD
Molecular Weight (MW)	492.73		(1) ACD
pKa (PKA)	9.45+/-0.28	Most Basic	(1) ACD
Vapor Pressure (VP)	3.80E-20 Torr	25.0 deg C	(1) ACD

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software Solaris V4.67 ((C) 1994-2005 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

7 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

ACCESSION NUMBER: 135:300482 CA
TITLE: Isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors
INVENTOR(S): Roberts, Susan B.; Hendrick, Joseph P.; Vinitsky, Alexander; Lewis, Martin; Smith, David W.; Pak, Roger
PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, USA
SOURCE: PCT Int. Appl., 127 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: G01N033-48
CLASSIFICATION: 7-1 (Enzymes)
Section cross-reference(s): 1, 9, 14
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001075435	A2	20011011	WO 2001-US10453	20010330
WO 2001075435	A3	20020808		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2405332	AA	20011011	CA 2001-2405332	20010330
US 2002025540	A1	20020228	US 2001-823153	20010330
US 6713248	B2	20040330		
EP 1305634	A2	20030502	EP 2001-922976	20010330
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004505608	T2	20040226	JP 2001-572863	20010330
US 2004121411	A1	20040624	US 2003-713981	20031114

PRIORITY APPLN. INFO.: US 2000-194495P 20000403
US 2001-823153 20010330
WO 2001-US10453 20010330

ABSTRACT:
The present invention provides an isolated, functionally-active protein that catalyzes cleavage of a γ-secretase substrate. The functional activity of the isolated protein suggests that the isolated protein includes γ-secretase. In one embodiment, the isolated γ-secretase protein is associated with presenilin 1. The present invention also relates to homogeneous methods for monitoring cleavage of β-amyloid precursor protein (βAPP) by γ-secretase, wherein the steps of isolating and retrieving cleavage products have been eliminated. Cleavage can be detected by binding a pair of fluorescent adducts to the γ-cleaved βAPP fragment. Preferably, a first fluorescent adduct binds to the carboxy-terminal end of the γ-cleaved βAPP fragment, with substantially no cross-reactivity to uncleaved βAPP or to other types of γ-cleaved βAPP fragments, while a second fluorescent adduct binds to a portion within the amino-terminal region on the γ-cleaved βAPP fragment. Detection of binding to the γ-cleaved βAPP fragment is determined by monitoring the fluorescent energy transfer between the adducts.

SUPPL. TERM: secretase gamma fluorescence detn amyloid precursor protein cleavage; presenilin 1 gamma secretase complex purifn detn

INDEX TERM: Presenilins
ROLE: PRP (Properties); PUR (Purification or recovery); PREP (Preparation)
(1, γ-secretase complexes; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: DNA sequences
(amyloid precursor protein-encoding; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Allophycocyanins
ROLE: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(cross-linked; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Rare earth complexes
ROLE: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(cryptates; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: UV lamps
(deuterium-tungsten lamp; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Laser induced fluorescence
(excitation; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Resonant energy transfer
(fluorescence; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Solubilization
Solubilizers
(in γ-secretase purification; isolation of functionally

active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Drug screening
Epitopes
Fluorescence excitation
Fluorescence quenching
Fluorescent indicators
Immunoassay
Microsome
Post-translational processing
(isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Amyloid precursor proteins
ROLE: ARG (Analytical reagent use); BPN (Biosynthetic preparation); PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Antibodies
ROLE: ARG (Analytical reagent use); BPN (Biosynthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Rare earth complexes
ROLE: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Antibodies
ROLE: ARG (Analytical reagent use); BPN (Biosynthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(labeled; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Fluorescence excitation
(laser induced; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Proteins, specific or class
ROLE: PUR (Purification or recovery); PREP (Preparation)
(membrane, integral, solubilization of; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Protein sequences
(of amyloid precursor protein; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Flash lamps
(xenon; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: Amyloid
ROLE: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(β-; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: 366522-28-3
ROLE: PRP (Properties)
(Unclaimed; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: 262412-30-6P 366520-86-7P
ROLE: ARG (Analytical reagent use); BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: 7440-33-7, Tungsten, analysis 7782-39-0, Deuterium, analysis
ROLE: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(deuterium-tungsten lamp; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: 7440-63-3, Xenon, analysis
ROLE: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(flash lamp; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: 338454-52-7DP, γ-Secretase, complexes with presenilin 1
ROLE: ANT (Analyte); PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: 338454-52-7, γ-Secretase
ROLE: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: 81-88-9 91-64-5, Coumarin 2321-07-5, Fluorescein 6268-49-1 7440-53-1D, Europium, cryptates, biological studies 50402-56-7, EDANS 70281-37-7, Tetramethylrhodamine 146368-14-1 146368-16-3 247144-99-6 304014-12-8D, salts
ROLE: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: 264902-77-4P, 3: PN: DE19849073 SEQID: 3 unclaimed DNA 366520-85-6P
ROLE: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nucleotide sequence; isolation of functionally active

γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: 76555-98-1
ROLE: NUU (Other use, unclassified); USES (Uses) (solubilizer; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: 366522-29-4 366801-12-9 366801-14-1
ROLE: PRP (Properties) (unclaimed protein sequence; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

INDEX TERM: 199164-91-5 366488-00-8 366488-01-9
ROLE: PRP (Properties) (unclaimed sequence; isolation of functionally active γ-secretase presenilin 1 complex and fluorescence assay for γ-secretase activity and inhibitors)

REFERENCE 2

ACCESSION NUMBER: 108:75714 CA
TITLE: Steroids and their cyclic hydrocarbon analogs with amino-containing sidechains, useful as antidiabetic agents and inhibitors of phospholipase A2
INVENTOR(S): Johnson, Roy A.; Bundy, Gordon L.; Youngdale, Gilbert A.; Morton, Douglas R.
PATENT ASSIGNEE(S): Upjohn Co. , USA
SOURCE: PCT Int. Appl., 177 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: C07J041-00
SECONDARY: C07J043-00; A61K031-56; A61K031-58; C07C087-34; C07C087-455; C07D213-38; C07F009-24; C07F009-22; A61K031-13
CLASSIFICATION: 32-3 (Steroids)
Section cross-reference(s): 1, 2
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8702367	A2	19870423	WO 1986-US2116	19861007
WO 8702367	A3	19880630		
W: JP, US, US				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
EP 243449	A1	19871104	EP 1986-906569	19861007
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
JP 63501217	T2	19880512	JP 1986-505710	19861007
US 4917826	A	19900417	US 1987-117851	19870616
US 5196542	A	19930323	US 1991-657721	19910220
US 5145874	A	19920908	US 1991-663037	19910225
US 5187299	A	19930216	US 1991-793486	19911113
US 5274089	A	19931228	US 1992-972693	19921106
US 5334712	A	19940802	US 1992-976751	19921116
US 5373095	A	19941213	US 1993-126153	19930923
US 5621123	A	19970415	US 1994-247169	19940520
PRIORITY APPLN. INFO.:			US 1985-788995	19851018
			US 1986-843120	19860324
			WO 1986-US2116	19861007
			US 1987-117851	19870616

US 1989-394396 19890815
US 1991-657721 19910220
US 1991-657729 19910220
US 1991-793486 19911113
US 1992-972693 19921106
US 1992-976751 19921116

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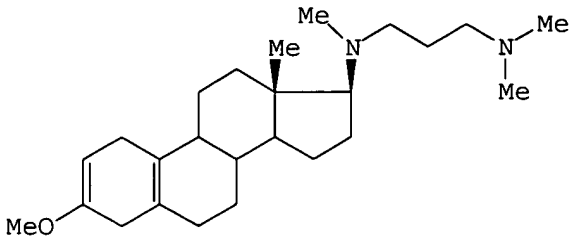

I

ABSTRACT:
A wide variety of steroids and nonsteroidal analogs bearing amino-containing sidechains were prepared for use as antidiabetic agents and in the treatment or prevention of phospholipase A2-mediated conditions. Reductive amination of estrone Me ether with Me2N(CH2)3NH2 and HCO2H at 160-170° gave N-[3-(dimethylamino)propyl]-N-formyl-3-methoxyestra-1,3,5(10)-trien-17β-amine, which was reduced by LiAlH4 in dioxane to the N-Me derivative This underwent Birch reduction, followed by 3 recrystns. in Et2O-MeCN, to give estradienamine derivative I. In the perfused guinea pig lung, I completely inhibited phospholipase A2 at 4 + 10-7 M.

SUPPL. TERM: amino steroid prepn antidiabetic phospholipase inhibitor; estranamine prepn antidiabetic phospholipase inhibitor

INDEX TERM: Antidiabetics and Hypoglycemics
(amino steroids and analogs)

INDEX TERM: Steroids, preparation
ROLE: SPN (Synthetic preparation); PREP (Preparation)
(amino, preparation of, and analogs, as phospholipase A2 inhibitors and antidiabetic agents)

INDEX TERM: 9001-84-7, Phospholipase A2
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(inhibitors of, amino-containing steroids and analogs as)

INDEX TERM: 53-44-1P 1434-85-1P, 17β-Hydroxy-5α-estran-3-one 1624-73-3P 5997-25-1P 30933-83-6P 40216-82-8P, Ornithine methyl ester dihydrochloride 57133-29-6P 75950-19-5P 76555-98-1P 112646-79-4P 112647-70-8P 112648-94-9P 112648-95-0P 112648-96-1P 112648-97-2P 112648-98-3P 112648-99-4P 112649-00-0P 112649-01-1P 112649-02-2P 112649-03-3P 112663-20-4P 112663-21-5P 112663-22-6P 112663-31-7P 112663-33-9P 112663-34-0P 112663-38-4P 112663-39-5P 112663-40-8P 112663-41-9P 112663-42-0P 112663-44-2P 112663-45-3P 112663-46-4P 112663-50-0P 112663-51-1P 112663-52-2P 112663-53-3P 112663-54-4P 112663-55-5P 112663-56-6P 112663-57-7P 112663-58-8P 112663-59-9P 112663-60-2P 112663-61-3P 112663-62-4P 112663-63-5P 112663-67-9P 112693-14-8P 112693-15-9P
ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in synthesis of phospholipase A2-inhibiting amino steroids and analogs)

INDEX TERM: 56-18-8P, 3,3'-Iminobis(propylamine) 26358-84-9P 28336-31-4P

ROLE: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

INDEX TERM: 2640-80-4P 4536-52-1P 4991-61-1P 4991-63-3P
5668-07-5P 5997-25-1P 6291-85-6P, 3-Ethoxypropylamine
17630-26-1P 17630-27-2P 20432-64-8P 32436-37-6P
57764-88-2P 57764-89-3P 59766-90-4P 96148-91-3P
112646-53-4P 112646-54-5P 112646-55-6P 112646-56-7P
112646-57-8P 112646-58-9P 112646-59-0P 112646-60-3P
112646-62-5P 112646-63-6P 112646-65-8P 112646-67-0P
112646-68-1P 112646-69-2P 112646-70-5P 112646-71-6P
112646-72-7P 112646-73-8P 112646-74-9P 112646-75-0P
112646-76-1P 112646-77-2P 112646-78-3P 112646-79-4P
112646-80-7P 112646-81-8P 112646-82-9P 112646-83-0P
112646-84-1P 112646-85-2P 112646-86-3P 112646-87-4P
112646-88-5P 112646-89-6P 112646-90-9P 112646-91-0P
112646-92-1P 112646-93-2P 112646-94-3P 112646-95-4P
112646-96-5P 112646-97-6P 112646-98-7P 112646-99-8P
112647-00-4P 112647-01-5P 112647-02-6P 112647-03-7P
112647-04-8P 112647-05-9P 112647-06-0P 112647-07-1P
112647-08-2P 112647-09-3P 112647-10-6P 112647-11-7P
112647-12-8P 112647-13-9P 112647-14-0P 112647-15-1P
112647-16-2P 112647-17-3P 112647-18-4P 112647-19-5P
112647-20-8P 112647-21-9P 112647-22-0P 112647-23-1P
112647-24-2P 112647-25-3P 112647-27-5P 112647-28-6P
112647-29-7P 112647-30-0P 112647-32-2P 112647-33-3P
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112648-08-5P 112648-09-6P 112648-10-9P 112648-11-0P
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112648-16-5P 112648-17-6P 112648-18-7P 112648-19-8P
112648-20-1P 112648-21-2P 112648-22-3P 112648-23-4P
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112648-28-9P 112648-29-0P 112648-30-3P 112648-31-4P
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112648-72-3P 112648-73-4P 112648-74-5P 112648-75-6P
112648-76-7P 112648-77-8P 112648-78-9P 112648-79-0P

ROLE: BAC (Biological activity or effector, except adverse);
BSU (Biological study, unclassified); SPN (Synthetic

preparation); BIOL (Biological study); PREP (Preparation)
(preparation of, as phospholipase A2 inhibitor and/or antidiabetic agent)

INDEX TERM: 112648-80-3P 112648-81-4P 112648-82-5P 112648-83-6P
112648-84-7P 112648-85-8P 112648-86-9P 112648-87-0P
112648-88-1P 112648-89-2P 112648-90-5P 112648-91-6P
112648-92-7P 112648-93-8P 112649-04-4P 112649-05-5P
112649-06-6P 112663-15-7P 112663-16-8P 112663-17-9P
112663-18-0P 112663-19-1P 112663-23-7P 112663-24-8P
112663-25-9P 112663-26-0P 112663-27-1P 112663-28-2P
112663-29-3P 112663-30-6P 112663-32-8P 112663-35-1P
112663-36-2P 112663-47-5P 112663-48-6P 112663-49-7P
112663-64-6P 112663-65-7P 112663-66-8P 112710-67-5P
112710-68-6P 112710-69-7P 112711-11-2P 112711-12-3P

ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of, as phospholipase A2 inhibitor and/or antidiabetic agent)

INDEX TERM: 50-28-2, reactions 51-67-2, Tyramine 53-16-7, Estrone, reactions 53-41-8 53-43-0, 3β-Hydroxy-5-androsten-17-one 53-45-2, Estra-1,3,5(10)-trien-17-one 64-04-0, Phenethylamine 64-18-6, reactions 71-44-3, Spermine 75-07-0, reactions 79-04-9 81-25-4 89-97-4, 2-Chlorobenzylamine 90-42-6, 2-Cyclohexyl cyclohexanone 91-00-9, Aminodiphenylmethane 92-68-2, 4-Cyclohexylcyclohexanone 95-00-1, 2,4-Dichlorobenzylamine 96-32-2, Methyl bromoacetate 100-46-9, reactions 100-52-7, reactions 102-49-8, 3,4-Dichlorobenzylamine 104-53-0, Hydrocinnamaldehyde 104-86-9, 4-Chlorobenzylamine 104-88-1, 4-Chlorobenzaldehyde, reactions 105-39-5, Ethyl chloroacetate 107-13-1, reactions 107-85-7, Isoamylamine 108-00-9, unsym-Dimethyl-ethylenediamine 108-31-6, reactions 108-94-1, reactions 109-01-3, N-Methylpiperazine 109-55-7, 3-Dimethylaminopropylamine 109-64-8, 1,3-Dibromopropane 109-76-2, 1,3-Propanediamine 110-13-4, 2,5-Hexanedione 110-60-1, 1,4-Diaminobutane 111-40-0 123-00-2, 3-Morpholinopropylamine 123-38-6, reactions 124-09-4, reactions 124-13-0, Octylaldehyde 124-20-9, Spermidine 124-25-4, Tetradecyl aldehyde 138-14-7 140-75-0, 4-Fluorobenzylamine 140-80-7, 2-Amino-5-diethylaminopentane 156-87-6 327-92-4, 1,5-Difluoro-2,4-dinitrobenzene 333-93-7, 1,4-Diaminobutane dihydrochloride 373-44-4, 1,8-Octanediamine 462-94-2, 1,5-Diaminopentane 502-72-7, Cyclopentadecanone 506-59-2, Dimethylamine hydrochloride 566-88-1, 5α-Cholestan-3-one 590-86-3, Isovaleraldehyde 593-51-1, Methylamine hydrochloride 598-21-0, Bromoacetyl bromide 617-89-0, 2-Aminomethyl-furan 646-25-3, 1,10-Decanediamine 700-58-3, 2-Adamantanone 766-39-2, 2,3-Dimethylmaleic anhydride 814-68-6, Acryloyl chloride 830-13-7, Cyclododecanone 929-06-6, 2-(2-Aminoethoxy)ethanol 963-74-6, 5α-Androstan-17-one 1035-77-4, Estradiol 3-methyl ether 1624-62-0, Estrone methyl ether 1755-52-8 2038-03-1, 2-Morpholinoethylamine 2393-23-9, 4-Methoxybenzylamine 2524-64-3, Diphenyl chlorophosphate 2706-56-1, 2-(2-Aminoethyl)pyridine 2740-83-2, 3-(Trifluoromethyl)benzylamine 3029-19-4, 1-Pyrenecarboxaldehyde 3048-01-9 3179-63-3 3300-51-4, 4-(Trifluoromethyl)benzylamine 3731-51-9, 2-(Aminomethyl)pyridine 3731-52-0, 3-(Aminomethyl)pyridine

3731-53-1, 4-(Aminomethyl)pyridine 4048-33-3,
6-Amino-1-hexanol 4097-89-6, Tris-(2-aminoethyl)amine
4894-75-1 5036-48-6 5104-49-4, Flurbiprofen 5538-95-4,
N-Dodecyl-1,3-propanediamine 5625-80-9 5680-79-5,
Glycine methyl ester hydrochloride 5993-91-9 6211-16-1
6384-10-7, Ornithine methyl ester 6711-48-4 7149-10-2
7152-51-4 7209-38-3, 1,4-Bis(3-aminopropyl)piperazine
7663-77-6, 1-(3-Aminopropyl)-2-pyrrolidinone 10025-87-3
10517-44-9 13258-63-4, 4-(2-Aminoethyl)pyridine
14210-25-4 19475-35-5 21370-71-8, trans-1-Decalone
27757-85-3, 2-Thiophenemethylamine 28143-91-1 29602-39-9
30525-89-4, Paraformaldehyde 31239-17-5,
5α-Androstan-17β-amine 34015-48-0, Lysine
methyl ester dihydrochloride 35303-76-5,
4-(2-Aminoethyl)benzenesulfonamide 40226-15-1 42014-51-7
49783-80-4 55757-60-3 56183-69-8, Diethyl
phosphorohydrazidate 69225-59-8 75659-75-5 83732-75-6,
2-(2-Aminoethyl)-1-methylpyrrole 85666-15-5 112663-37-3
112663-43-1
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in synthesis of phospholipase A2-inhibiting
amino steroids and analogs)

REFERENCE 3

ACCESSION NUMBER: 104:187118 CA
TITLE: Fixed steroids
INVENTOR(S): Itagaki, Koji; Ito, Takeshi; Ando, Kyoto
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: C08F008-00
CLASSIFICATION: 35-8 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 32, 80
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60133005	A2	19850716	JP 1983-241342	19831221

PRIORITY APPLN. INFO.: JP 1983-241342 19831221
ABSTRACT:
Products useful as carriers in affinity chromatog. are prepared by amidation of carboxylated steroids with polyalkylenepolyamines and reaction of the amides with insol. matrix polymers having amine-reactive groups. Thus, heating 20 g Et cholate with 100 g Me2N(CH2)3NH2 16 h at 140° gave 21.1 g amide. Heating 19.4 g amide and 5 g chloromethylated styrene-divinylbenzene polymer in 1:1 dioxane-MeOH for 16 h at 70° gave 10.3 g fixed steroid (ion exchange volume 1.08 mequiv/g dry resin).

SUPPL. TERM: styrene copolymer matrix chromatog; cholic amide fixation chromatog; affinity chromatog steroid fixation; amide steroid carrier chromatog; dimethylpropanediamine reaction cholic acid
INDEX TERM: Chromatography, column and liquid
(affinity, stationary phases for, fixed steroids as)
INDEX TERM: 9003-70-7D, chloromethylated, reaction products with steroid aminoamides 76555-98-1D, reaction products with chloromethylated styrene copolymers
ROLE: USES (Uses)

(carriers in affinity chromatog.)

REFERENCE 4

ACCESSION NUMBER: 99:2687 CA
TITLE: Sulfobetaine derivatives of bile acids: nondenaturing surfactants for membrane biochemistry
AUTHOR(S): Hjelmeland, Leonard M.; Nebert, Daniel W.; Osborne, James C., Jr.
CORPORATE SOURCE: Dev. Pharmacol. Branch, Natl. Inst. Child Health Hum. Dev., Bethesda, MD, 20205, USA
SOURCE: Analytical Biochemistry (1983), 130(1), 72-82
CODEN: ANBCA2; ISSN: 0003-2697
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 9-10 (Biochemical Methods)
Section cross-reference(s): 32, 46

ABSTRACT:
The syntheses of 4 new sulfobetaine derivs. of bile salts are presented, along with a general set of criteria for useful detergents in membrane biochem. Phys. properties including the critical micelle concentration, aggregation number, partial
sp. volume, critical micellar temperature, UV-visible spectrum, and CD spectrum were examined for the new compds. To examine the interaction of this class of compds. with macromols., CHAPS was further studied. CD spectra of apolipoprotein C-III2 were measured in the presence of varying concns. of CHAPS to determine the effect of this compound on secondary structure. Gel-exclusion chromatog. and sedimentation equilibrium studies of cytochrome P 450 in the presence of CHAPS was also performed to establish the ability of this detergent to disaggregate cytochrome P 450 to a monomeric/dimeric state.

SUPPL. TERM: detergent prepn bile acid deriv; sulfobetaine deriv zwitterionic surfactant
INDEX TERM: Detergents
(preparation of nondenaturing, for membrane biochem.)
INDEX TERM: Bile acids
ROLE: ANST (Analytical study)
(sulfobetaine derivs., as nondenaturing detergents)
INDEX TERM: Betaines
ROLE: ANST (Analytical study)
(sulfo-, cholic acid derivs., as nondenaturing detergents)
INDEX TERM: 9035-51-2, biological studies
ROLE: BIOL (Biological study)
(disaggregation of, by sulfobetaine derivs. of bile acids)
INDEX TERM: 81-25-4 83-44-3
ROLE: ANST (Analytical study)
(mixed anhydride preparation from)
INDEX TERM: 76555-98-1P 85954-19-4P
ROLE: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation and alkylation of)
INDEX TERM: 75621-03-3P 82473-24-3P 85964-38-1P 85964-39-2P
ROLE: PREP (Preparation)
(preparation and characterization of, as nondenaturing detergent for membrane biochem.)
INDEX TERM: 85954-17-2P 85954-18-3P
ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with dimethylaminopropylamine)
INDEX TERM: 109-55-7 6711-48-4
ROLE: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with cholic acid anhydride)

REFERENCE 5

ACCESSION NUMBER: 97:52173 CA
TITLE: Nondenaturing zwitterionic detergents for membrane biochemistry
INVENTOR(S): Hjelmeland, Leonard
PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA
SOURCE: U. S. Pat. Appl., 47 pp. Avail. NTIS Order No. PAT-APPL-6-294 203
CODEN: XAXXAV
DOCUMENT TYPE: Patent
LANGUAGE: English
CLASSIFICATION: 9-10 (Biochemical Methods)
Section cross-reference(s): 46
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 294203	A0	19820409	US 1981-294203	19810819
US 4372888	A	19830208		
US 181465	A0	19810327	US 1980-181465	19800826
WO 8300694	A1	19830303	WO 1982-US1123	19820819
W: JP				
RW: AT, BE, CH, DE, FR, GB, LU, NL, SE				
JP 58501279	T2	19830804	JP 1982-502842	19820819
EP 85717	A1	19830817	EP 1982-902934	19820819
EP 85717	B1	19861029		
R: AT, BE, CH, DE, FR, GB, LI, LU, NL, SE				
CA 1179326	A1	19841211	CA 1982-409779	19820819
AT 23166	E	19861115	AT 1982-902934	19820819
PRIORITY APPLN. INFO.:			US 1980-181465	19800826
			US 1981-294203	19810819
			EP 1982-902934	19820819
			WO 1982-US1123	19820819

ABSTRACT:
Preparation of 2 nondenaturing zwitterionic detergents, 3-[(3-cholamidopropyl)dimethylammonio]-1-propanesulfonate (CHAPS) and 3-[(3-cholamidopropyl)dimethylammonio]-2-hydroxy-1-propanesulfonate (CHAPSO), is described for solubilization of membrane proteins. CHAPSO was 2-fold more effective in solubilizing active opiate receptors than CHAPS.

SUPPL. TERM: membrane protein solubilization zwitterionic detergent
INDEX TERM: Receptors
ROLE: PROC (Process)
(for opiates, solubilization of, nondenaturing zwitterionic detergents for)
INDEX TERM: Membrane, biological
(protein solubilization of, nondenaturing zwitterionic detergents for)
INDEX TERM: Opiates and Opioids
ROLE: ANST (Analytical study)
(receptors for, solubilization of, nondenaturing zwitterionic detergents for)
INDEX TERM: Proteins
ROLE: PROC (Process)
(solubilization of, of membranes, nonnaturing zwitterionic detergents for)
INDEX TERM: Detergents
(zwitterionic, for membrane protein solubilization)
INDEX TERM: 76555-98-1P

ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactions of, with propanesultone or sodium chlorohydroxypropanesulfonate)

INDEX TERM: 82473-24-3P
ROLE: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as detergent for membrane protein solubilization)

INDEX TERM: 75621-03-3P
ROLE: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as detergent for solubilization of membrane proteins)

INDEX TERM: 109-55-7
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with cholic acid)

INDEX TERM: 81-25-4
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dimethylaminopropylamine)

INDEX TERM: 126-83-0
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dimethylaminopropylcholamide)

INDEX TERM: 1120-71-4
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dimethylpropylcholamide)

REFERENCE 6

ACCESSION NUMBER: 95:38693 CA
TITLE: Nondenaturing zwitterionic detergents for membrane biochemistry
INVENTOR(S): Hjelmeland, Leonard M.
PATENT ASSIGNEE(S): United States Dept. of Health, Education, and Welfare, USA
SOURCE: U. S. Pat. Appl., 22 pp. Avail. NTIS Order No. PAT-APPL-181 465.
CODEN: XAXXAV
DOCUMENT TYPE: Patent
LANGUAGE: English
CLASSIFICATION: 9-13 (Biochemical Methods)
Section cross-reference(s): 32
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 181465	A0	19810327	US 1980-181465	19800826
CA 1173823	A1	19840904	CA 1981-382720	19810728
EP 46523	A1	19820303	EP 1981-106105	19810804
EP 46523	B1	19840725		
R: BE, CH, DE, FR, GB				
US 294203	A0	19820409	US 1981-294203	19810819
US 4372888	A	19830208		
JP 57073095	A2	19820507	JP 1981-132668	19810826
JP 03002877	B4	19910117		
PRIORITY APPLN. INFO.:			US 1980-181465	19800826

ABSTRACT:
Preparation of zwitterionic detergents, which are a combination of a bile salt hydrophobic group and a sulfobetaine-type polar group, is described for solubilizing membrane proteins in a nondenatured state. 3-[(3-Cholamidopropyl)dimethylammonio]-1-propanesulfonate (I) preparation is described. The Et3NH+ salt of cholic acid was formed in THF, then ethylchloroformate was added to precipitate Et3NHCl, which was removed from the mixed anhydride by filtration. The mixed anhydride reacted with 3-dimethylaminopropylamine to

form N-(3-dimethylaminopropyl)cholamide (II), EtOH, and CO2. In the final step, the tertiary amine group of II reacted with propane sultone to give the sulfobetaine, I. The yield was 75-80% theor., and the purity of I was >95% as judged by TLC.

SUPPL. TERM: membrane protein solubilization zwitterionic detergent; cholamidopropyldimethylammoniopropanesulfonate membrane protein; cholate sulfobetaine deriv detergent

INDEX TERM: Detergents
(for membrane proteins solubilization, nondenaturing zwitterionic)

INDEX TERM: Proteins
ROLE: SPN (Synthetic preparation); PREP (Preparation)
(of membranes, solubilization of, nondenaturation zwitterionic detergents preparation for)

INDEX TERM: Cell membrane
(proteins of, solubilization of, nondenaturing zwitterionic detergents preparation for)

INDEX TERM: Solubilizers
(zwitterionic nondenaturing detergent, for membrane proteins)

INDEX TERM: 78327-01-2P
ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with 3-dimethylaminopropylamine)

INDEX TERM: 1120-71-4P
ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with dimethylaminopropylcholamide)

INDEX TERM: 76555-98-1P
ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with propanesultone)

INDEX TERM: 75621-03-3P
ROLE: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as nondenaturing detergent for membrane protein solubilization)

INDEX TERM: 121-44-8, reactions
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with cholate)

INDEX TERM: 81-25-4
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with triethylamine)

INDEX TERM: 109-55-7
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with triethylammonium cholate)

REFERENCE 7

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AUTHOR(S): Hjelmeland, Leonard M.
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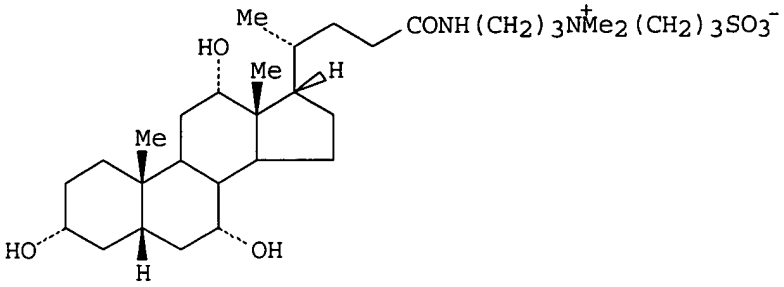

I

ABSTRACT:
The synthesis and evaluation of a new detergent that is a zwitterionic derivative (I) of cholic acid is presented. This detergent combines the useful properties of both the sulfobetaine-type detergents and the bile salt anions. The new detergent proved to be effective at solubilizing membrane proteins in a nondenatured state.

SUPPL. TERM: CHAPS prepn microsome solubilization; cholamidopropyldimethylaminopropanesulfonate prepn microsome solubilization; surfactant prepn microsome solubilization

INDEX TERM: Surfactants
(CHAPS, preparation and membrane-solubilizing properties of)

INDEX TERM: Microsome
(solubilization of, by nondenaturing detergent)

INDEX TERM: 75621-03-3P
ROLE: PREP (Preparation)
(preparation and membrane-solubilizing properties of)

INDEX TERM: 76555-98-1P
ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with propanesultone)

INDEX TERM: 109-55-7
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with cholic acid)

INDEX TERM: 81-25-4
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dimethylaminopropylamine)

INDEX TERM: 1120-71-4
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dimethylaminopropylcholamide)

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